CONSTRUCTION NEWS

Supplement to ENGINEERING NEWS.

New York, December 7, 1905.

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CONSTRUCTION NEWS.

PLANS AND SPECIFICATIONS ON FILE.

The following Plans (P.), Specifications (S.), and Bidding Sheets (B. S.) may be seen at the office of The Engineering News Publishing Co., 220 Broadway, New York:

Bids close.	Work.	Place.	On file.	See issue.
Dec.				
9	Electric elevator	Norfolk, Va	S	11-16
•10	Railroad	Brookville & Mahoning	S	11-23
11	Garbage plant	Detroit, Mich	S	12- 7
12	R. R. excavation, &c	L. I. R. R	P. & S	12- 7
•15	Irrigation canals	Billings, Mont	P. & S	11-23
•15	Telephone system	Billings, Mont	P. & S	11-23
16	Dredging, filling	Phila., Pa	S	12- 7
•18	Gas producer	Winnipeg, Man	S	11-16
•18	Pumping engines	Cleveland, O	S	12- 7
•29	Irrigation canal	S. F'ncisco, Cal	P. & S	11-23
• —	Steel rolled beams	New York	S	10-12
Jan.				
•2	Water system	Manila	P. & S	9-21
•4	Garbage crem't'y	Lexington, Ky	S	11-30
•12	Sewer system	Manila	P. & S	9-21
•15	Irrigation canal	Billings, Mont	P. & S	12- 7
16	Pipe sewers	Boston, Mass	S	11-23

•Work advertised in Engineering News.

NOTE—We are desirous of securing specifications and bidding sheets (and plans when not too bulky) of pending work for file in our New York office for the benefit of contractors or others who may be interested in the work. If more sets than one are sent us we shall be pleased to distribute these to contractors who ask for them. When the work is advertised in Engineering News a note that the plans are filed with us will be added to the advertisement without cost.

LIST OF CONTRACTS PENDING.

Bids close. Work. Place. See issue.

LIGHT, HEAT AND POWER PLANTS.

Dec. 7.Electric plant, Sparta, Ga..............Nov. 23
Dec. 8.Lighting plant, Augusta, Ky...........Dec. 7
Dec. 16.Electric plant, Brazil..................Nov. 9
Dec. 18.Gas plant, Winnipeg, Man.............Nov. 16
Advertised, Eng. News, Nov. 16 and 23.
Jan. 5.Electric wiring, Washington, D .C......Dec. 7
Jan. 5.Park lighting, Milwaukee, Wis..........Dec. 7

BRIDGES.

Dec. 7.Bridges, Fargo, N. Dak..................Nov. 30
Dec. 7.Bridges, steel, Girard, Kan.............Nov. 30
Dec. 7.Bridge, New York, N. Y...............Nov. 30
Dec. 8.Bridges, Sioux Falls, S. Dak...........Nov. 23
Dec. 9.Bridges, New York, N. Y.............Nov. 30
Dec. 10.Bridges, Oswego, Kan................Dec. 7
Dec. 12.Bridge work, Madison, Neb............Dec. 7
Dec. 14.Bridges, Canton, S. Dak...............Dec. 7
Dec. 14.Bridges, Edina, Mo...................Dec. 7
Dec. 15.Bridge, Milwaukee, Wis.................Nov. 23
Dec. 18.Bridge, steel, Wilson, N. C.............Nov. 30
Advertised, Eng. News, Nov. 30 and Dec. 7.
Dec. 18.Bridge, Oklahoma, Okla................Nov. 30
Dec. 19.Bridge, Cambridge, O..................Nov. 30
Dec. 19.Abutments, Cambridge, O..............Dec. 7
Dec. 20.Bridge, Knoxville, Tenn...............Dec. 7
Dec. 22.Bridge, Carlisle, Pa...................Dec. 7
Dec. 27.Bridge, Norristown, Pa................Dec. 7
Jan. 1.Steel bridge, Pensacola, Fla............Sept. 28
Jan. 1.Bridge, steel, Pensacola, Fla..........Nov. 2
Jan. 2.Steel bridge, Duluth, Minn.............Nov. 30
Jan. 4.Bridges, Salem, Mass..................Dec. 7
Jan. 9.Steel bridge, Chattanooga, Tenn........Dec. 7
Advertised, Eng. News, Dec. 7 and 14.
Jan. 23.Bridge, Belgium ....Nov. 2

BUILDINGS.

Dec. 7.Buildings, Mt. Pleasant, Mich..........Nov. 16
Dec. 7.School house, Laurel, Miss.............Nov. 9
Dec. 8.Y. M. C. A. building, Montgomery, Ala.Nov. 16
Dec. 9.Electric elevator, Norfolk, Va...........Nov. 16
Dec. 10.Hotel, Springfield, Mo...................Nov. 30
Dec. 11.Library, Bloomington, Ind.............Nov. 23
Dec. 11.Dormitory, Gainesville, Fla............Nov. 23
Dec. 12.Court-house, New York, N. Y..........Nov. 30
Dec. 12.Court-house, Fairmont, Minn...........Nov. 16
Dec. 12.Capitol building, Bismarck, N. Dak......Oct. 5
Dec. 13.Rewiring, Central Islip, N. Y..........Dec. 7
Advertised, Eng. News, Dec. 7.
Dec. 14.School, Humboldt, Tenn................Nov. 9
Dec. 15.Bank building, Conway, S. C...........Nov. 23
Dec. 15.Stable, Ft. Meade, S. Dak..............Nov. 23
Advertised, Eng. News, Nov. 23 and 30.
Dec. 16.Building, Lincoln, Neb..................Nov. 30
Dec. 18.Building, Ft. Leavenworth, Kan........Nov. 30
Dec. 18.School, Hasbrouck Heights, N. J........Dec. 7
Dec. 20.School, Sanford, N. C..................Nov. 23
Dec. 20.Experiment station, Annapolis, Md.....Nov. 16
Dec. 20.Convenience Station, Washington, D. C..Dec. 7
Advertised, Eng. News, Nov. 30 and Dec. 7.
Dec. 21.Office building, Philadelphia, Pa........Dec. 7
Advertised, Eng. News, Dec. 7 and 14.
Dec. 22.Heating, etc., Prescott, Ariz.............Nov. 30
Dec. 30.Stable, Fort Assinniboine, Mont........Dec. 7
Advertised, Eng. News, Dec. 7 to Jan. 4.
Advertised, Eng. News, Nov. 30 to Dec. 28.
Jan. 2.Buildings, Riverside, Cal..............Nov. 30
Jan. 4.Post-office, Natchitoches, La...........Nov. 16
Advertised, Eng. News, Nov. 16 and 23.
Jan. 4.Library, Bloomington, Ind..............Nov. 23
Advertised, Eng. News, Nov. 23.
Jan. 5.Electric systems, Washington, D. C....Dec. 7
Advertised, Eng. News, Dec. 7 to Jan. 11.
Jan. 5.Heating system, etc., Washington, D. C..Dec. 7
Advertised, Eng. News, Dec. 7 to Jan. 11.
Jan. 5.Heating, etc., Washington, D. C........Nov. 30
Jan. 10.Post-office, Reno, Nev..................Nov. 16
Jan. 15.Building, So. McAlester, Ind. T.........Nov. 23
Jan. 31.Library plans, Toronto, Ont.............Nov. 23

WATER SUPPLY AND IRRIGATION.

Dec. 13.Brass goods, pipe, Vancouver, B. C....Nov. 16
Dec. 14.Sluice Gates, etc., Richmond, Va......Dec. 7
Dec. 15.Tank, mains, Sleepy Eye, Minn........Dec. 7
Dec. 15.Tank and tower, Lovington, Ill........Nov. 30
Dec. 15.Well, Kirkwood, Ill.....................Nov. 30
Dec. 15.Irrigation canal, etc., Billings, Mont....Oct. 19
Advertised, Eng. News, Oct. 19 to Dec. 14.
Dec. 18.Water and light plant, Abbeville, La....Nov. 23
Advertised, Eng. News, Nov. 23 to Dec. 14.
Dec. 18.Pumping engine, Cleveland, O...........Nov. 30
Advertised, Eng. News, Nov. 30.
Dec. 21.Mains, grading, etc., Avalon, N. J.....Dec. 7
Advertised, Eng. News, Dec. 7 and 14.
Dec. 29.Irrigation canal, San Francisco, Cal......Nov. 2
Advertised, Eng. News, Nov. 2 to Dec. 28.
Dec. 30.Pumping engine, Washington, D. C.....Dec. 7
Advertised, Eng. News, Dec. 7 and 14.
Jan. 2.Water-works, Philippines.... ....Sept. 21
Advertised, Eng. News.

The Advertisers in Engineering News

are prepared to submit bids for furnishing the machinery, tools or equipment for any work, no matter what the size, or where located.

The **Engineers, Technical Experts** and **Contractors** who advertise in Engineering News are also in a position to submit plans and estimates for construction work. When you want work done quickly and well place yourself in correspondence with our advertisers.

Jan. 15.Irrigation canal, Billings, Mont.........Dec. 7
Advertised, Eng. News, Dec. 7 to 18.
No date.Water meters, Delphi, Ind.............Dec. 7
Advertised, Eng. News, Dec. 7.

SEWERAGE.

Dec. 9.Sewer, Harrisburg, Pa.................Dec. 7
Dec. 11.Sewerage, Sheldon, Ia..................Oct. 12
Dec. 11.Sewers, South Brooklyn, O..............Nov. 23
Dec. 12.Sewers, Cleveland, O..................Dec. 7
Dec. 14.Sewers, Cleveland, O..................Dec. 7
Dec. 16.Pipe sewers, Boston, Mass..............Nov. 23
Dec. 18.Sewage plant, Fort Oglethorpe, Ga......Nov. 30
Advertised, Eng. News, Nov. 30 to Dec. 21.
Dec. 18.Sewer system, Kincardine, Ont..........Dec. 7
Dec. 18.Pipe sewers, Petersburg, Va...........Dec. 7
Dec. 19.Pipe sewer, Independence, Kan..........Nov. 23
Dec. 20.Trunk sewer, South Bend, Ind.........Dec. 7
Dec. 20.Sewerage, etc., Bristol, Pa.............Nov. 16
Advertised, Eng. News, Nov. 16 and 23.
Dec. 21.Sewers, water mains, Muskogee, Ind. T.Nov. 30
Dec. 27.Sewers, drains, Cincinnati, O..........Dec. 7
Jan. 12.Sewer system, Philippines..............Sept. 21
Advertised, Eng. News.

STREETS AND ROADS.

Dec. 8.Road, Cincinnati, O......................Nov. 16
Dec. 8.Roads, Live Oak, Fla....................Nov. 30
Dec. 9.Road, Princeton, Ind....................Nov. 30
Dec. 11.Roads, Knox, Ind........................Nov. 30
Dec. 11.Paving, Syracuse, N. Y................Dec. 7
Dec. 12.Paving, New York, N. Y...............Dec. 7
Dec. 12.Paving, Shelbyville, Ind.................Nov. 30
Dec. 12.Paving, Cincinnati, O....................Nov. 30
Dec. 13.Paving, New York, N. Y...............Dec. 7
Dec. 14.Roadway, Niagara Falls, Ont...........Dec. 7
Dec. 14.Paving, Lakewood, O.....................Nov. 30
Dec. 18.Paving, Sherman, Tex.................Dec. 7
Dec. 18.Grading, Perth Amboy, N. J............Dec. 7
Dec. 19.Sidewalks, Cincinnati, O..............Dec. 7

MISCELLANEOUS CONTRACTS.

Dec. 7.Wharf, Charleston, S. C................Nov. 9
Advertised, Eng. News, Nov. 9 to Nov. 30.
Dec. 8.Pipe, fittings, etc., Washington, D. C....Nov. 23
Dec. 8.Boat repairs, New York, N. Y..........Nov. 30
Dec. 10.21-mile Ry., Brookville & Mahoning Ry..Nov. 23
Advertised, Eng. News, Nov. 23 and 30.
Dec. 10.Elevator, tools, Washington, D. C......Nov. 16
Dec. 11.Dredging, New York, N. Y...........Nov. 23
Advertised, Eng. News, Nov. 23 to Dec. 14.
Dec. 11.Garbage plant, Detroit, Mich............Nov. 30
Dec. 12.Ry. excavation, etc., L. I. R. R.........Dec. 7
Dec. 12.Ditch work, Alexandria, Minn..........Nov. 30
Dec. 12.Lamps, generator, etc., Wash., D. C....Nov. 16
Dec. 12.Dam, Wheeling, W. Va.................Nov. 9
Advertised, Eng. News, Nov. 9 to Dec. 14.
Dec. 13.Iron fence, New York, N. Y...........Nov. 30
Dec. 15.Telephone system, Billings, Mont.........Nov. 2
Advertised, Eng. News, Nov. 2 to Dec. 14.
Dec. 15.Railways, Philippines ....Sept. 21
Dec. 15.Fire engine, Superior, Wis..............Nov. 30
Dec. 15.Fire alarm system, Seymour, Ind.......Nov. 30
Dec. 15.Ditch work, Babcock, Wis.............Dec. 7
Dec. 15.Riprap, New York, N. Y...............Dec. 7
Dec. 16.Dredging, filling, Philadelphia, Pa.......Dec. 7
Dec. 18.Metal work, Philadelphia, Pa...........Nov. 23
Advertised, Eng. News, Nov. 23 and 30.
Dec. 18.Chanoine wickets, Pittsburg, Pa..........Nov. 23
Advertised, Eng. News, Nov. 23 to Dec. 21.
Dec. 18.Plows, eveners, etc., Washington, D. C..Dec. 7
Dec. 20.Brick Tunnel, Milwaukee, Wis.........Dec. 7
Advertised, Eng. News, Dec. 7 and 14.
Dec. 22.Dredging, etc., Richmond, Va...........Nov. 23
Advertised, Eng. News, Nov. 23 to Dec. 21.
Dec. 26.Machine, pipe, etc., Washington, D. C..Nov. 30
Dec. 26.Machine tools, etc., Washington, D. C....Nov. 30
Dec. 27.Lock, dams, wall, Chicago, Ill............Nov. 2
Advertised, Eng. News, Nov. 2.
Dec. 29.Wharf, Fort Monroe, Va...............Dec. 7
Advertised, Eng. News, Dec. 7 and 21.
Dec. 29.Wharf, Fort Monroe, Va...............Nov. 30
Jan. 1.Statue, Indianapolis, Ind.... ....July 20
Advertised, Eng. News, July 20.
Jan. 2.Railway, Chile..........................Aug. 24
Advertised, Eng. News, Nov. 9 to Dec. 28.
Jan. 4.Garbage crematory, Lexington, Ky....Nov. 30
Advertised, Eng. News, Nov. 30 to Dec. 28.
Jan. 9.Wharf work, New Zealand ....Nov. 2
Jan. 12.Ditch work, Glencoe, Minn.............Nov. 30
Jan. 15.Excavation, Buffalo, N. Y............Dec. 7
Advertised, Eng. News, Dec. 7 to 14.
May 1.Steel dock, Chile ....Nov. 9

RAILWAYS.

The names of parties awarded contracts are printed in capital letters.

ABBOTTSFORD & NORTHEASTERN.—An extension will be built next spring, probably, from Athens, Wis., to Merrill. F. Rietbrock is Pres. and Gen. Mgr., at Milwaukee, Wis.

ATCHISON, TOPEKA & SANTA FE.—Improvements to cost $250,000 have been ordered and are in course of construction on branch between St. Joseph, Mo., and Lexington Junction, Mo. J. Dun is Ch. Engr., at Chicago.

ATCHISON, TOPEKA & SANTA FE.—The company has filed its second amended charter of the Eastern Oklahoma Ry. providing for an extension from Davis to Sulphur Springs, Ind. T. As previously noted, the directors voted on Oct. 23d to build this extension.

BAY COUNTIES R. R.—Company has been incorporated, with $1,000,000 capital, to build a standard-gage railway from Napa, Cal., through Napa, Sonoma and Marin Counties to a point on San Pablo or San Francisco bays and thence by ferry system to San Francisco, a distance of about 45 miles.

BIRMINGHAM, COLUMBUS, AND ST. ANDREWS BAY.—THOMAS WORTHINGTON, of Birmingham, Ala., has contract, it is reported, for grading a section of this railway from Chipley, Fla., to St. Andrews Bay, Fla., 50 miles. We were informed by an officer recently that capital for construction was arranged for. The line, as projected, will be 200 miles long, from Chipley to Greenville, Fla., to Dotnan, Abbeville, and Eufaula, Ala., Pittsview, Ala., and Columbus, Ga. W. M. Gordon, Columbus, Ga., is Pres., and J. M. Garret, Chipley, Fla., is Ch. Engr. S. E. MILLER, of Philadelphia, Pa., has general contract, according to a Baltimore report.

BALTIMORE & OHIO.—Repair shops, a round-house, and extended improvements on the passenger station will soon be in progress at the terminal of the Baltimore & Ohio Railroad in Philadelphia, Pa., according to Philadelphia "Ledger." It has been voted that $700,000 be expended on the improvements, which will probably be begun next March. D. D. Carothers is Ch. Engr., at Baltimore, Md.

CHICAGO, ROCK ISLAND & PACIFIC.—A cut-off will be built from Des Moines to Iowa City, Ia., and also another cut-off from Atlantic to Council Bluffs, Ia. These improvements are given out in the announcement of the decision of the executive board of the company to expend a large sum in shortening the lines west of the Mississippi River and reducing the grades. J. B. Berry, former Ch. Engr. of the Union Pacific Ry., will be Engr.-in-Charge of this reconstruction work. It is planned to have definite estimates ready by Jan. 1. The reconstruction of the line between Bureau and Moline, Ill., is also to be undertaken soon. W. L. Darling is Ch. Engr., at Chicago, Ill.

COOK COUNTY & SOUTHERN.—Company has been incorporated in Illinois, with a capital of $50,000, to build a railroad from Franklin Park south to Cary, in Cook County. The office of the company will be at Chicago. The incorporators include: James S. Hopkins, Royal Wright and E. M. McKinney, all of Chicago; John M. Peffers, of Aurora; and George W. Child, of Hinsdale, Ill.

CHICAGO & WESTERN ILLINOIS.—An amendment to its charter has been filed by this company. The proposed route is now from northern point of Cook County, Ill., through Cook, Du Page, Will and Kankake Counties. W. E. Phillips is Pres. and H. L. Martin, Secy. The main office is at 184 La Salle St., Chicago.

CHICAGO & NORTHWESTERN.—A committee from the Lincoln Commercial Club has conferred with G. F. Bidwell, Mgr., Nebraska & Wyoming Division, regarding the proposed extension from Lincoln to Beaver Crossing, Neb.

It is announced that extensions covering 528 miles of new road are under construction by the Chicago & Northwestern Ry. It is expected the greater part of this work will be completed before the end of 1906. About one-fourth of this new mileage will be in Wyoming, where an extension is now building from Casper to Shoshone, a distance of 103 miles. Another extension in Wyoming is from Shoshone to Lander, a distance of 45 miles, or 148 miles in all. In South Dakota the road is building 165 miles of new track from Pierre to Rapid City. This work is done under the name of the Pierre, Rapd City & Northwestern Ry. Co., but the Chicago and Northwestern is behind the enterprise. Another subsidiary company is the Manitowoc, Green Bay & Northwestern, which is building from Manitowoc to Gillett, Wis., a distance of 66 miles, with a branch from Pulaski to Eland Junction, a distance of 48 miles, or 114 miles in all. The remainder is done by the Milwaukee & State Line Ry., which is building from Mayfair to Lake Bluff and to St. Francis, Wis., which will be a double-track line throughout its entire length, and which is now almost completed.

COLORADO SOUTHERN, NEW ORLEANS & PACIFIC.—A stockholders' meeting will be held on December 20 to amend company's charter to increase the capital stock by $7,000,000, to a total of $12,000,000. C. C. Cordill is Pres., and H. Generes Dufour is Secy. and Treas.; offices, 607 Liverpool, London & Globe Bldg., New Orleans, La. This railway is to be built from Baton Rouge, La., to Beaumont, Tex., absorbing the Beaumont & Northern Ry., and extending to Houston, Tex.

CENTRAL RY. OF GEORGIA.—Improvements will be made at Athens, Ga., costing $100,000. H. M. Steele is Ch. Engr., at Savannah, Ga.

CHICAGO, MILWAUKEE & ST. PAUL.—At a special meeting of directors of the Chicago, Milwaukee & St. Paul Ry. Co. on Nov. 29, the Board formally authorized the building of the extension to the Pacific coast, from Evarts, S. Dak., to Seattle and Tacoma, Wash. It was specified in the official announcement that the work of construction is to begin forthwith. Estimated cost, $50,000,000. A subsidiary company, the Pacific Ry., will build this extension. D. J. Whittemore is Ch. Engr., at Chicago.

CANADA.—Regarding railroad development in the Hudson Bay district, the Philadelphia "Bulletin" states that, at the present time, the Canadian Northern Railway has surveyors in the field running a line from Prince Albert, in Saskatchewan, to Fort Churchill, on the shores of the bay. One of the officials of the company has stated that contracts for a portion of the construction will be let next year and efforts made to reach the bay at the earliest possible date. A company known as the Manitoba & Midland Railroad Co. is now letting contracts for construction from a point on the Manitoba and American boundary line to Portage la Prairie, Man., and surveyors are running lines north of that town in the direction of the bay. It is reported that C. S. Mellen, of New York, is one of the promoters of this company, but so far his name has not appeared in connection with the line. Further west in Manitoba a company known as the Brandon, Saskatchewan & Hudson's Bay Railway Co. is having surveys made from Devil's Lake, N. Dak., due north, and active construction on the grades probably will be begun soon. It is reported that the incorporators are all employees of the Northern Pacific Ry. Both these latter companies are rushing surveys with all possible speed.

CHICAGO, MILWAUKEE & ST. PAUL.—Contract for building 800 miles of extension has been awarded to McINTOSH BROS., of Milwaukee, Wis.

GEORGETOWN & WESTERN.—It is reported that an extension will be built from Georgetown to Marion, S. C., 70 miles. W. H. Andrews is Supt., at Georgetown, S. C., and R. S. Farr is Gen. Mgr.

GRAVITY R. R.—This company has been chartered, capital $50,000, to build a line about 2,000 ft. long from the Asheville & Craggy Mountain Ry. to the top of Sunset Mountain. W. B. Williamson, W. P. Northup, Reginald Howland, of Asheville, N. C.; R. H. Tingley, Montclair, N. J., and others are the incorporators.

LIBERTY-WHITE R. R.—This company will gravel ballast 25 miles of its line and improve the grades and curves next year. W. M. White is Gen. Mgr., at McComb City, Miss. The railway is 42 miles long and 15 miles additional are now under construction.

LONG ISLAND R. R.—Bids will be received until 10 a. m., Dec. 12, by the Brooklyn Grade Crossing Commissioners, 44 Court St., Brooklyn, N. Y., for the Bay Ridge improvement contract. Work includes approximately 1,000,000 cu. yds. of excavation. A portion of the excavated material is to be loaded on cars and disposed of by the Long Island R. R. Co. and the balance is to be placed in embankment. The construction of concrete abutments and retaining walls will approximate 15,000 cu. yds. and also the construction of pipe culverts and sewers. L. V. Morris is Engr.-in-Charge, 44 Court St. The whole of the Long Island Railroad improvement, including the Bay Ridge terminal will cost from $6,500,000 to $7,000,000, and the work on the Brighton Beach line will cost $2,000,000. Plans and specifications for this work are on file at office of Engineering News, 220 Broadway, New York.

MILL VALLEY & MT. TAMALPAIS SCENIC RY.—Amended articles of incorporation have been filed. Capital stock is $200,000. The incorporators are Wm. C. B. de Fremery, Arthur A. Martin, William C. Savage, Charles E. Green and Sidney B. Cushing. The directors are: William C. B. de Fremery, of Oakland; Arthur A. Martin, David McKay and Charles E. Green, of San Francisco; Sidney B. Cushing, of San Rafael; and Cornelius Toohey and William C. Savage, of Marin County. A 4-mile spur will be built.

MISSISSIPPI.—It is reported that the Mississippi Lumber Co., of Quitman, Miss., is interested in the proposed construction of a railroad from Meridian, Miss., via Quitman to the Tombigbee River. C. F. Thompson is Gen. Mgr.

NEW YORK, NEW HAVEN & HARTFORD.—The Boston & New York Air Line, which is now operated under lease by the N. Y., N. H. & H. Ry., is that part of the New Haven system between New Haven and Willimantic, Conn., consisting of 52.26 miles of first track, 5.23 miles of second track and 16.34 miles of siding, making 73.73 miles in all. This Air Line is to be double-tracked probably next year. Edward Gagel is Ch. Engr., at New Haven, Conn.

NEW ORLEANS & NORTHEASTERN.—Regarding a recent report, C. C. Harvey, Pres. and Gen. Mgr., at New Orleans, La., states that "while the company may double-track the line from New Orleans to Lake Ponchartrain next year, it will be done by the company's forces."

NORTH CAROLINA.—It is reported that J. E. Purcell, of Red Springs, N. C., desires to communicate with responsible brokers to finance a proposed railroad to be about 50 miles long.

OKLAHOMA.—A press report from Pawhuska, Okla., states that field notes and profiles for the railroad to be built from Caney, Kan., southwest through Pawhuska and Blackburn to Perry or Guthrie, Okla., have been filed with the Indian agent at Pawhuska, and construction work will probably be commenced as soon as satisfactory arrangements regarding bonuses are made with the towns along its line. The road is promoted by Senator S. M. Porter, of Caney, Kan.; and W. R. Stubbs, of Lawrence, Kan., backed by Philadelphia capitalists.

PUEBLO, OKLAHOMA CITY & NEW ORLEANS.—Financial arrangements are said to have been made for building this railway from Oklahoma City, Okla., to Fort Supply, about 150 miles. Construction may be commenced in January. Noted fully in Engineering News on Nov. 16.

PENNSYLVANIA R. R.—It is planned by this company to spend about $95,000,000 on improvements during 1906. New construction work east of Pittsburg, Pa., to be undertaken next year, will cost, it is estimated, about $18,000,000. This work is to be entirely apart from work already authorized and including the construction of a new low grade double-track freight line from Glen Loch to West Philadelphia, 20 miles, at a cost of $7,000,000. It is proposed to build two additional tracks from Trenton, N. J., to Waverly, N. J., 45 miles, as a continuation of the low-grade freight line to New York, at a cost of about $5,500,000. An expenditure of $2,500,000 is proposed on the middle division, covering the cost of two additional tracks between Vandyke and Port Royal, Pa., five miles, and another track from Vineland to Mount Vernon, seven miles. This will complete the four-track system on the division between Newport and Trimmer's Rock. An extension of the four-track system for the Pittsburg division at a cost of $2,000,000 is proposed between Sang Hollow and Bolivar, 17 miles, completing the four-tracking, except for a stretch of four miles between South Fork and Mineral Point on this division. On the West Pennsylvania $1,000,000 is to be expended for rebuilding and double-tracking the line between Tunnelton and Blairsville, nine miles.

SAN PEDRO, LOS ANGELES & SALT LAKE.—It is reported that contract for grading the Bullfrog extension has been awarded to DEAL BROS. & MENDENHALL, of Springville, Utah.

TIDEWATER RY.—We are advised that MACARTHUR BROS., 11 Pine St., New York City, have been awarded the general contract for constructing 110 miles of railway. This firm also has been awarded contracts for building 12 to 15 tunnels, two of which are to be one mile in length. Same firm has already started construction on another section of this railway, which was previously awarded and noted in Engineering News. H. Fernstrom is Ch. Engr., at Norfolk, Va. It is reported that WM. H. QUIGG, of Wilmington, Del., has been awarded contract for another section of the Tidewater Ry. extension.

ELECTRIC RAILWAYS.

The names of parties awarded contracts are printed in capital letters.

AUGUSTA, ME.—We are advised that nothing is being done toward building the Augusta & Waterville Ry., from Augusta to Waterville, 20 miles. This company was recently incorporated.

SKOWHEGAN, ME.—It is reported that the Skowhegan & Norridgewock Ry. & Power line will be put in operation to form a link in proposed third-rail line from Skowhegan to Farmington, about 28 miles. The S. & N. Ry. is five miles long. C. J. Abbey is Supt. and Mgr., at Skowhegan.

PLYMOUTH, MASS.—Contract will be awarded at once by the Plymouth, Carver & Wareham St. Ry. for construction of its line. The directors of the corporation are: W. S. Kyle, H. M. Saunders and James B. Collingwood, of Plymouth; John T. Pierce, of Tremont; and Henry S. Griffith Eugene E. Shaw and T. T. Vaughan, of Carver. The estimate of George E. Morgan, the Engr., places the actual cost of the road at $143,873, with a 10% allowance for contingencies, making at $157,873. The road is to be 16 miles in length, traversing the territory between Tremont in West Wareham, the town of Carver and the town of Plymouth, to Plymouth village, Mass.

NORWICH, CONN.—Directors of the Norwich, Mystic & Westerly Street Ry. Co. have awarded to the NATIONAL CONSTRUCTION & EQUIPMENT CO., of New York, the general contract for the construction of an electric line from this city' to Westerly, R. I. Work will begin at once. The contractors, it is said, will sublet parts of the contract in order to expedite operations. Work is to commence at both Norwich and Westerly. The building of the road will cost about $500,000. Address of the contracting company is not given in New York City directory.

ITHACA, N. Y.—We are informed by C. L. Crandall, a promoter of the Ithaca & Elmira Electric Ry., that location will be completed about Jan. 1, 1906. Right-of-way is nearly all secured. Company is not organized and capital is not yet secured. The line will be 39 miles long, extending from Ithaca to Enfield, Mecklinburg, Cayuta Lake Odessy, Horseheads and Elmira.

GENEVA, N. Y.—The Geneva, Phelps & Newark Electric Ry. Co. has been incorporated to construct and operate an electric railway between Geneva and Newark. The company is incorporated at $400,000. The directors are S. W. Hayes, president of the Hayes Track Appliance Co.; Hon. Walter A. Clark, Pres. of the Philips & Clark Stove Co.; Lansing G. Hoskins, of the law firm of Hoskins & Messenger; Thomas H. Chew, vice-Pres. of the First National Bank; O. J. C. Rose of the firm of Dorchester & Rose; Edward H. Palmer, Pres. of the Empire Coke Co.; Theodore J. Smith, vice-Pres. and Gen. Mgr. of the W. & T. Smith Co., all of Geneva; S. S. Partridge, of Phelps; and E. K. Burnham, of Newark. It is said work on the road will be commenced as soon as the consent of the state railway commission is procured. The Geneva terminus will be at the corner of Castle and Genessee Sts., and in Newark terminal at Miller and Main Sts. The road will pass through Main St. in Phelps. The length of the road will be about 15 miles. It is also proposed to run a spur from Phelps to Clifton Springs, also one from Newark to Sodus.

WILKES-BARRE, PA.—The Wilkes-Barre & Wyoming Valley Traction [illegible] will extend its line to Courtdale. Thomas A. Wright is Gen. Supt.

HAGERSTOWN, MD.—We [illegible] advised that the Hagerstown & Northern [illegible] is building a 9½-mile extension from [illegible] to Waynecastle which will be completed by April 1, 1906. E. E. Piper is Ch. E[illegible] and W. C. Hepperle is Supt. at Hag[illegible].

PARKERSBURG, W. VA.—[illegible] is reported that the Parkersburg & Ohio Valley Electric Railway Co. has sold $[illegible] of bonds to John Shrader, of Chester, W. Va., and that work will be resumed immediately between Sisterville and Friendly, [illegible] miles, by F. H. BLODGETT & CO., the contractors. C. L. Williams, T. J. Anderson and Col. J. F. Partridge, of Parkersburg; J. [illegible] Livingston and P. H. Anderson, of Friendly, and [illegible] Smith, of Sisterville are interested.

FAIRMONT, W. VA.—The Fairmont & Fairview Traction Co., which proposes to build a line about 20 miles long, has organized as follows: President, E. [illegible] Rutherford, Scottsdale, Pa.; vice-Pres., S. [illegible] Dillinger, Baltimore; Secy., Charles E. Conaway, Fairmont; Treas., B. F. Overholt, Scottsdale; Attorney, T. J. Conaway, Fairmont. Company will build a line from Fairmont to Amos. Capital stock, $50,000.

BRUNSWICK, GA.—The Southern Electric, Gas & Water Co., which has the franchise to build a street railway in Brunswick, is reported as announcing that work will begin immediately, and that cars will be in operation by June 15, 1905. J. H. Neff, of Jacksonville, Fla., is Pres.

BIRMINGHAM, ALA.—We are advised that the Birmingham Ry., Light & Power Co. will build a 2-mile extension from Bessemer to Jonesboro, Ala. Right-of-way is secured and franchise is granted. Capital is secured. Contract may be let at an early date, work to be completed within six months, although company may increase its present force and do this work itself and not let contract. Robt. Jemison is Pres. at Birmingham, and J. A. Emery is Gen. Mgr.

NEW ORLEANS, LA.—The New York-New Orleans Electric Co. has been chartered to build or purchase railroads and tramways operated by electricity or otherwise between point in Tangipahoa parish or elsewhere in Louisiana. Capital, $1,000,000. The directors are Maurice J. Hart, Pres.; Hewes T. Gurley, vice-Pres.; Robert O. Randle, Secy. and Treas.; Albert Bloom, John E. Bouden, Jr., and J. W. Fairfax.

TERRE HAUTE, IND.—We are informed that preliminary surveys are being made and information is being obtained as to whether the proposed electric railway from Lafayette, Ind., to Crawfordsville and Terre Haute would be feasible. J. R. Bonnell is the promoter, at Crawfordsville, Ind.

WHITEWATER, WIS.—Committees from Geneva, Elkhorn, Whitewater, Fort Atkinson and Jefferson have held meeting to consider a proposition by Dr. M. Furlong of Chicago, for building an electric road from Geneva, through these cities, to Jefferson, a distance of about 45 miles. It is estimated that $400,000 will be needed to build the road and secure the rolling stock and power house. A committee of ten was elected, with Mayor J. W. Paige of Elkhorn at its head to negotiate with Granger, Farwell & Co. of Chicago, with a view to securing funds for the work. It is reported that this firm, under certain conditions, would supply $500,000 or $600,000 if the balance were raised. Among those interested are H. H. Curtiss, of Fort Atkinson; George Kispert of Jefferson; Arthur Hoard, of Fort Atkinson; Dwight Allen, of Geneva; Mayor Paige, of Elkhorn; Senator Z. P. Beack, T. M. Blackman, President Albert Salisbury and F. R. Bloodgood, of Whitewater; John Snyder, R. J. Lean, T. J. Sleep and H. C. Norris Elkhorn; George Copeland and A. Stiel, Jefferson; E. Davidson, J. E. Nethercut, B. B. Arnold, Lake Geneva and Charles Rogers, of Fort Atkinson.

IMBODEN, ARK.—We are informed that no construction work has been undertaken yet by the Imboden Light & Transit Co. on its line from Imboden to Annieville, Smithville and other points in Yell County. Company is undecided as to other terminals. The line, which will be 25 miles long, may extend to Batesville, via Smithville and Jesup. Route has been selected. J. L. McKarney, of Imboden, is interested.

AUSTIN, TEX.—A. J. Eilers, Pres. of the Business League, at Austin, is interested in plan to build an electric railway from Austin to Lockhart.

BROWNWOOD, TEX.—John G. Lee states that a company is being organized to build a street railway in Brownwood, and is seeking information about gasoline motor cars.

DENISON, TEX.—A Texas press report announces that the Denison Board of Trade is considering the advisability of a conference with the officials of the Washita Valley Interurban Electric Railway, a projected line from Anadarko, Okla., to Shreveport, La., as what bonus, if any, Denison will put up to have the line built through this city. J. G. V. Redman, of Tishomingo, Ind. T., Pres. of the Washita Valley Co., has written a letter asking that the conference be arranged. He states, according to the press report, that he has recently been to New York and negotiated the sale of the bonds to be issued on the road. The railway may be completed by June, 1906.

ROOSEVELT, OKLA.—The Wichita Mountain Traction Co., capital $250,000, has been granted a charter to build an electric railway from Roosevelt to Apache, 50 miles. Headquarters are at Roosevelt and Hobart, Okla. The incorporators are W. R. McKnight, E. A. Coulter, C. L. Johnson and Guy M. Parker, of Roosevelt; John A. McKeene, of Hobart.

VALLEJO, CAL.—J. W. Hartzell of Vallejo, is interested in project to build a system of electric railways in Solano County which would cost $3,000,000 approximately. W. H. Smith, Gen. Mgr. of the Vallejo, Benicia & Napa Valley Ry., at Vallejo, may be interested.

TACOMA, WASH.—The Tacoma Ry. & Power Co. will extend its Point Defiance line through the business section. Est. cost, $60,000. W. S. Dimmock is Mgr., at Tacoma.

RED BLUFF, CAL.—We are advised by E. B. Walbridge, of Tuscan, Cal., that surveys have been made for the proposed Red Bluff & Tuscan Springs R. R. Right-of-way is secured. Capital is partly obtained. No date has been fixed for receiving bids. The line, as previously noted, will be nine miles long.

SAN JOSE, CAL.—The San Jose & Santa Clara Ry. Co. has petitioned the City Council for a franchise to change the entire system into a broad-gage road. Company desires a 50-year franchise. D. F. Hanchett, Pres. of the company, states that $1,000,000 will be expended in rebuilding and equipping the road. This work will commence as soon as the franchises are granted. Engineers at present are surveying for a double track between San Jose and Alum Rock Park. The company will lay 60-lb. rails outside the city and 70-lb. in the city, and use the very latest rolling stock equipped with high-power motors. The proposed work will be completed during the coming year. Hugh Center is Mgr.

STOCKTON, CAL.—The Central California Traction Co. has been granted a franchise for an electric railway over San Joaquin County roads, from the Calaveras River through Lodi and Woodbridge.

LIGHT AND POWER PLANTS.

The names of parties awarded contracts are printed in capital letters.

JERSEY CITY, N. J.—Bids were received on Nov. 27 by the Board of Street and Water Commissioners for gas and oil lighting of city streets for one year. Contract for oil lighting was awarded to the AMERICAN LIGHTING CO., at $2.18 a lamp a month, for about 305 lamps. Contract for gas lighting was awarded to the PUBLIC SERVICE CORPORATION, at $26.50 a light a year for 475 gas lights. George T. Bouton is Clk.

STEELTON, PA.—The plant of the Steelton Light, Heat & Power Co., Second and Washington Sts., Steelton, which was destroyed by fire recently will be rebuilt soon, it is reported. Noted last week.

PITTSBURG, PA.—Dr. H. B. Burns, of the 11th Ward, has presented a resolution in Select Council authorizing the appointment of a joint committee of seven to inquire into cost of city ownership of electric lighting. Franchises have been applied for by the City Electric Co., represented by Dr. E. R. Waters; and the Southside Electric Mfg. Co., represented by Dr. W. H. Weber.

WILMINGTON, DEL.—Plans are under way for a power plant for the new Wilmington Heat, Light & Power Co., which was recently granted a franchise. Construction will begin in the spring.

WASHINGTON, D. C.—Bids are asked until 2 p. m., Jan. 5, for installation of the electric wiring and conduit systems of two laboratory buildings for the Department of Agriculture. B. T. Galloway is Chn. Bldg. Com.

It is announced that the S. MORGAN-SMITH COMPANY, of York, Pa., has been awarded a contract by Secretary Hitchcock for water wheels for the Roosevelt power houses, Salt River project, Arizona. The amount of the contract is $19,165.

SHENANDOAH, VA.—GEORGE C. MORGAN, of Chicago, has been awarded the contract for water-works and electric light and power plant. Bids will be received until Jan. 2, it is reported, for machinery and material. A. R. Martin is Town Clk. Probable cost, $30,000. Arthur M. Morgan, Royal Insurance Bldg., Chicago, is Engr.

THOMASVILLE, GA.—City has voted to issue $30,000 of bonds for purchase of a municipal light and power plant. Local plant will be purchased.

LOUISVILLE, KY.—The Louisville & Nashville Ry. Co. will install a $150,000 central heating and power plant in its new office building at 10th St. and Broadway.

AUGUSTA, KY.—Bids are asked until noon, Dec. 8, for installation of a municipal lighting plant. J. P. Reese is Chn. of Com.

TOLEDO, O.—BENTLEY & SONS, of Toledo, have been awarded contract for new addition to power-house of the Toledo Railways & Light Co. L. E. Beilstein is Mgr.

CINCINNATI, O.—Bids will be received about Jan. 15, according to the "Enquirer," for construction of a power house for new Fourth St. Hotel. Est. cost, $160,000. George R. Belch, vice-Pres. Cincinnati Realty Co., is interested.

TERRE HAUTE, IND.—Edward S. Kidder, Cy. Engr., has made preliminary survey for location of new municipal lighting plant. Noted last week.

ELK RAPIDS, MICH.—A. E. FRENCH, of Elk Rapids, has been awarded the contract for erecting the power house for the Elk Rapids Power & Electric Lighting Co. Noted last week.

SAGINAW, MICH.—We are informed that bids will be received about April 1, 1906, for proposed power plant for the Rifle River Power Co., at Saginaw. Est. cost is $350,000. H. Von Schon, Wayne County Bank Bldg., Detroit, Mich., is Designing Engr. George Silsbury, Saginaw, is Pres.

LINCOLN, ILL.—John A. Simpson, Chn. of Com. on Lights, will receive bids for municipal lighting of this city, it is reported.

MADISON, WIS.—The University of Wisconsin will build a $250,000 heating and power plant south of University Ave. Edward Birge, Ph. D., is Pres.

LACROSSE, WIS.—We are informed that the Wisconsin Light & Power Co. will receive bids in March, 1906, for construction of a gas plant to cost about $450,000. Charles H. Williams is Gen. Mgr.

ALMOND, WIS.—We are advised that the Almond Milling Co. will erect an electric plant at Almond.

MILWAUKEE, WIS.—Bids are asked until noon, Jan. 5, for lighting with naptha or other illuminant the parks and parkways for three or five years. Frank P. Schumacher, Secy. Bd. Park Comrs.

Three propositions for city electric lighting are now before common council for consideration. They are: (1) A bid from the Milwaukee Electric Ry. and Light Co., offering to light the city for $60 a lamp a year on a ten year contract; $65 a year on a five year contract, and $81 a year for lights on an overhead circuit and $99 a year for lights on an underground circuit for any period less than five years. (2) A recommendation by a special committee appointed by the common council, consisting of Alderman F. J. Stiglbauer and City Engineer Charles J. Poetsch, that a municipal plant be built, by means of which the committee believes lights can be secured for $55 a year. (3) The offer of the Municipal Electric Light & Power Co. to provide lights for $90 a year, the city to retain $30 on each $90 paid to the company, the sums thus retained to be used in buying the company's plant at the expiration of 15 years. If the amount so credited, with interest, is in excess of the investment the excess shall be paid to the city; if it is not equal to the investment the city must make up the deficiency, otherwise the purchase plan fails. Noted on Nov. 23.

ALEXANDRIA, S. DAK.—C. H. Peckham is negotiating with the council here for the establishment of gas plant to light the city, it is reported.

ABERDEEN, S. DAK.—We are informed that bids are asked until Dec. 9 for purchase of $35,000 of bonds for proposed light and power plant. W. G. Wells is Chn. Com. Engineer is not yet employed to prepare plans.

SALIDA, COLO.—It is reported that the Salida Light, Power & Utility Co., of Salida, will erect a new power plant to cost $85,000.

DENVER, COLO.—The Denver & Rio Grande R. R. Co. will install electric lighting plants in all its shops and an electric lighting system will be used on its trains. Electric plants will be placed at the Burnham shops, at Pueblo, Grand Junction, Salida, in Colo.; and Salt Lake City, Utah. Est. cost is $1,000,000. Thomas Tipton is Purchasing Agent, at Denver. E. J. Yard is Ch. Engr., at Denver.

SOCORRO, N. MEX.—We are advised that Socorro Water & Light Co., recently incorporated, has had preliminary surveys made. It is proposed to install a light plant to be run by water power, furnished by a hot spring, 288 ft. above the power site. The water after generating power by water which will be used to supply the city of Soccoro. The water is 96% pure. G. A. Collins, Santa Fe., N. Mex., is Ch. Engr., and Frank Owen, Santa Fe, is Mgr.

EUGENIA, ONT.—We are advised that H. Von Schon, Wayne County Bank Bldg., Detroit, Mich., is Engr. for proposed power development and power plant at Eugenia for the Georgian Bay Power Co. Bids for this project will be received about March 1, 1903. Estimated cost is $250,000.

CAMPBELLFORD, ONT.—City will develop power extensively if application which the council has made to the Department of Railways and Canals is granted. In the near future work will be commenced on a new dam which, it is expected, will develop 3,000 HP. With the erection of the new dam the town will have power to sell to manufacturing concerns, in addition to the power required for the operation of the electric light and water-works plant.

HALIFAX, N. S.—F. W. Doane, City Engr., is reported to have stated that it is "quite possible that a municipal plant may be decided upon for Halifax, but at present the city is simply obtaining information in reference to the experience of other cities with municipally owned plants."

BRIDGES.

The names of parties awarded contracts are printed in capital letters.

SALEM, MASS.—Bids are asked by Essex County Commissioners, Jas. P. Hale, Asst. Clk., until noon, Jan. 4, for construction of substructure and superstructure of a rolling lift bridge over the New Canal on Western Ave., Gloucester, Mass. Bids are also asked until noon, Jan. 4, for building a new bridge over the Danvers River, between Salem and Beverly.

ALBANY, N. Y.—It is stated that the New York Central & Hudson River R. R. is to prepare plans for a bridge over its tracks and the tracks of Boston & Albany R. R., on the Columbia Turnpike, to replace the present structure. A. W. Carpenter, New York, is Engr. Bridges, N. Y. C. & H. R. R. R.

CHARLEROI, PA.—Contract for construction of toll bridge over Monongahela River at this place has been let to AMERICAN BRIDGE CO., New York. A sub-contract has been awarded to FRIDAY CONTRACTING CO. Bridge is to provide for two trolley roads, as well as for foot traffic, and will cost about $250,000.

NORRISTOWN, PA.—Bids are asked by Montgomery and Chester County Commissioners until Dec. 27, for constructing intercounty bridge over Schulykill River, near Saratoga Station. Separate bids are wanted on substructure and superstructure. John H. Dager, is Engr. Robert C. Miller, Norristown, is Clk., County Comrs.

CARLISLE, PA.—Bids are asked by County Commissioners, W. A. Lepperd, Clk., until 2 p. m., Dec. 22, for construction of bridge over a creek.

WHEELING, W. VA.—Baltimore & Ohio R. R., D. D. Carothers, Ch., Engr., Baltimore, Md., according to reports, is to bridge the Ohio River at this place.

KNOXVILLE, TENN.—It is reported that plans, specifications and estimates will be received until Dec. 20 at office of B. S. Williams, 208½ Vine Ave., for construction of a bridge; estimates will be taken on stone or concrete arch, steel or wooden bridge. Information as to length, width and strength of structure can be obtained by addressing B. S. Williams, L. E. Parrott and Ben Gaylon, Com. Bridge is to be located at this place.

CHATTANOOGA, TENN.—Bids are asked by Board Public Works, A. L. Thomas, Chn., until 2.30 p. m., Jan. 9, for the erection of the superstructure of a steel highway bridge, single span, 176 ft. long, on 11th St. (Advertised, Engineering News.)

OWENSBORO, KY.—Owensboro Business Men's Association is advocating erection of a bridge over Ohio River at this place. It is proposed to organize a company with $50,000 capital.

CLEVELAND, O.—City is stated to have approved plans of New York, Chicago & St. Louis R. R., F. E. Hart, Engr., Cleveland, for new drawbridge to be constructed in the railroad viaduct over the Cuyahoga River in this city. Railroad is also said to contemplate erection of a single track bridge at Cedar ave. crossing.

BARBERTON, O.—Council has adopted plans of Erie R. R., M. R. Strong, Engr. Bridges and Buildings, New York, for a viaduct over Cornell St. City will bear one-fourth the expense.

CAMBRIDGE, O.—Bids are asked by County Commissioners, J. T. Beggs, Chn., until 1 p. m., Dec. 19, for construction of two abutments, with wing walls, for bridge over Chapman Creek. Separate bids are desired for stone and concrete.

WINAMAC, IND.—We are advised that following bids were received Nov. 27 by Ellis S. Rees, County Audr., for constructing 100 × 14 ft. bridge over Agnew Creek: Canton Bridge Co., Canton, O., $1,910; Lafayette Engineering Co., Lafayette, Ind., $1,957; Walker Bros., Portland, Ind., $2,000; WINAMAC BRIDGE CO., Winamac, Ind., $1,883 (awarded contract).

PEORIA, ILL.—Illinois Traction Co., represented by Judge J. C. Pinkney and John Berry, is stated to have made proposition to Council Committee looking to the construction of a bridge to cost about $350,000. Alderman Writing, Chn. Bridge Com., is reported to favor the erection of the bridge by the city, instead of by the company as is proposed in its proposition.

NEW ULM, MINN.—County Commissioners have awarded contract for steel bridge over Minnesota River at site of Hinderman Ferry to HENNEPIN BRIDGE CO., Minneapolis, Minn., for about $3,900.

MINNEAPOLIS, MINN.—Northern Pacific Ry., E. J. Pearson, Ch. Engr., is said to be planning to strengthen and rebuild many of its bridges within the limits of this city. The first project will be the replacing of the present structure over Plymouth Ave. with a bridge capable of bearing twice the weight and accommodating twice the traffic of the present one.

OSWEGO, KAN.—County Commissioners, C. W. Littleton, Chn., are taking bids until Dec. 10 for the construction of the following bridges: A 60-ft. span bridge, a 42-ft. span bridge, and a 32-ft. span bridge; each bridge is to have 12 ft. roadway.

MADISON, NEB.—Bids are asked by Emil Winter, County Clk., until noon, Dec. 12, for erection, completion and repairing of bridges and approaches thereto, to be built or repaired during 1906.

SOUTH OMAHA, NEB.—Union Pacific R. R. is stated to be having surveys made for a viaduct to cross its tracks at U. St. Herman Beal is Cy. Engr.

CANTON, S. DAK.—Bids are asked by County Commissioners, Charles Kundert, County Audr., until 2 p. m., Dec. 14, for construction of steel and pile bridges to be built ensuing year. Bidders are to submit plans and specifications for steel bridges.

EDINA, MO.—Bids are reported asked by Thos. Conway, Road and Bridge Comr., until 2 p. m., Dec. 14, for constructing twelve steel bridges, consisting of one bridge of 60 ft. span, one of 48 ft. span, three of 36 ft. span, and seven of 28 ft. span.

BOWLING GREEN, MO.—Pike and Ralls counties are considering erection of bridge at Spencer Creek ford.

FLORENCE, COLO.—Contract for bridge work and pile driving on the Colorado Fuel & Iron Co.'s canal has been let to H. M. FOX, Florence. The contract will require over 1,000,000 ft. of lumber.

TACOMA, WASH.—Following bids were received Nov. 24 by County Commissioners, I. M. Howell, County Audr., for erecting drawbridge over Hyleboo Creek: NORTHWEST BRIDGE CO., Tacoma, Wash., $6,000, with 5½ cts. per lin. ft. for additional piling (awarded contract); American Pile Driving Co., Everett, Wash., $7,894, with 6 cts. per lin. ft. for additional piling; Geo. E. Vergow & Co., Tacoma, Wash., $6,818; Puget Sound Bridge & Dredging Co., Seattle, Wash., $6,050; International Contract Co., Seattle, Wash., $6,174.

MEDICAL LAKE, WASH. — City has awarded contract for bridge over north end of Medical Lake to WILLIAM OLIVER, for $1,645.

UNION, ORE.—Bridge over Wallowa River near Elgin, is to be rebuilt at an early date at an est. cost of $6,500. O. R. & N. R. R., and Union and Wallowa Counties will share the cost.

SAN DIEGO, CAL.—City Council has passed resolution of intention for the construction of a combination wood and steel bridge across Switzer Canon.

GRANGEVILLE, IDAHO. — Bids were opened Nov. 22 by County Commissioners, J. I. Overman, Clk. Dis. Court, for constructing wood bridge at Kooshia, the contract being let to ZORNES & WIMPEY, Stites, Idaho, for $990.

VANCOUVER, B. C.—A $1,500,000 bond issue will probably be voted on at next election. Part of this sum will be used for the construction of bridges at Westminster Ave. and Granville Sts.

BUILDINGS.

The names of parties awarded contracts are printed in capital letters.

HOLYOKE, MASS.—Plans and specifications have been completed and approved for the new $50,000 armory.

NEW HAVEN, CONN.—We are informed that plans are being prepared for a new steel and concrete stadium for Yale University, with a seating capacity of about 40,000 people.

NEW LONDON, CONN.—Bids have been received by Donnelly & Hazeltine, 94 State St., for the Mariner's Savings Bank.

NEW LONDON, CONN.—We are informed that an appropriation of $50,000 has been made by New London County, as the county's share towards the combined city and county building here.

BROOKLYN, N. Y.—Bids were received Dec. 4, at the office of Supt. of Schools, for the general construction, etc., of new public school No. 8, between Poplar and Middagh Sts., Brooklyn, as follows: Arci Construction Co., 99 Broadway, Brooklyn, $184,900; Clarke & Stowe, 221 Greenpoint Ave., Brooklyn, $186,600; Wm. Werner, 892½ Forrest Ave., New York, $188,729; C. H. Peckworth, $189,655; P. J. Brennan, 1931 Broadway, $189,952; H. M. Weed & Co., 124 West 45th St., $194,398; R. Henningham, 4 Court Square, Brooklyn $198,495; Geo. Hilderbrand, 38 Park Row, New York, $198,780; Thos. Cockerill & Son, 147 Columbus Ave., New York, $215,900; Thos. McKeown, 521 West 110th St., New York, $217,400.

NEW YORK, N. Y.—The competition for the Broadway Savings Institution, 23 Park Pl., New York, has been won by York & Sawyer, 156 Fifth Ave., New York. Approximate cost is $200,000.

W. P. Tuthill, 287 Fourth Ave. New York, is taking bids on the alteration to the Stauger Rheumatic and Gout Institute, 149-151 East 67th St., New York. Approximate cost is $43,000.

WATSON FLAGG ENGINEERING CO., 27 Thames St., New York, has contract for electric wiring on 46th St., and Broadway, New York. Plans by H. C. Pittman, 156 Fifth Ave., New York.

C. A. French, Arch., 627 Columbus Ave., New York, has plans in progress for an office building at 120 West 20th St., New York for Walsh & McGuckin, 114th St. and Lenox Ave., New York. Building to be 7 stories, 25 × 110 ft.

MARC EIDLITZ & SON, 489 Fifth Ave., New York, are the general contractors for the new office building at 20, 22, 24 Vesey St., New York, for the New York Evening Post. Plans by R. D. Kohn, 170 Fifth Ave. Brick and stone, 12 stories, 75 × 100 ft.

Following bids were opened Dec. 4, at the Department Buildings for the completion of the electric lighting system in the Criminal Court Building, corner Franklin and Centre Sts., New York. Commercial Construction Co., 1 Madison Ave. New York, $19,300; Peet, McAnerney & Powers, 225 Fourth Ave., New York, $20,760; Rees & O'Donovan, 1123 Broadway, New York, $25,400; W. M. Sheehan & Co., 136 Liberty St., New York, $28,848; Lord Electric Co., Fuller Bldg., New York $35,885.

H. E. CAMPBELL, 1133 Broadway, has been awarded contract for ornamental iron on H. B. Claflin & Co.'s department store, 16 to 9 West 34th St., New York. Hale & Rogers, 92 William St., New York, are architects.

GEO. S. HOHNES, 156 West 27th St., New York, has been awarded contract for metal lathing and furring on the new Custom House, by Joseph Eastman. Cass Gilbert, 79 Wall St., Arch.

T. J. BRADY & CO., 1123 Broadway, New York, has the general contract for the alteration of T. J. Healy's building on 71st St. and Amsterdam Ave. Total cost will be approximately $43000.

CENTRAL ISLIP, N. Y.—Bids are asked until 3 p. m., Dec. 13, by State Commission in Lunacy. T. E. McGarr, Secy., Albany, N. Y., for rewiring Groups A, B, and C, Central Islip State Hospital. G. L. Heins, State Arch., Albany, N. Y. (Advertised, Engineering News.)

NEW YORK, N. Y.—THE AMSTERDAM BUILDING CO., 41 West 24th St., N. Y., have the general contract for the apartment house at 33-37 East 30th St., New York. Snelling & Potter, 1170 Broadway, Archs.

Plans are completed for a synagogue and school at 132-142 East 111th St., for the Congregation Uptown Talmud Torah, 171 Broadway. Approximate cost is $250,000. Brick, stone and terra cotta, 4 stories, 95 × 95 ft.

Lord & Hewlett, Archs., 16 East 23d St., are revising the plans and specifications for the Fort Hamilton Library. Bids ran too high on first figuring.

NEW YORK, N. Y.—Bids are asked until 11 a. m., Dec. 11, by Board of Education, for general construction, etc., of additions and alterations in Public School No. 34 on Victor St., and Amethyst Ave., Borough of Bronx.

NEW YORK, N. Y.—Bids are asked until 10.30 a. m., at office of Fire Commissioner for furnishing the labor and materials required in the erection and completion of a building for a hook and ladder company on 135th St., 100 ft. west of Lenox Ave., Borough of Manhattan.

ROCHESTER, N. Y.—A site has been purchased for a new parish house for the Men's Guild of the Third Presbyterian Church of Rochester, N. Y. No plans have been drawn but the approximate cost is reported $40,000.

SYRACUSE, N. Y.—Plans for the new armory have been approved. Final plans are now in hands of Syracuse Militia authorities. Contracts will be awarded about Jan. 1, 1906. The front will measure 160 ft. and depth 280 ft.

BROOKLYN, N. Y.—Plans are completed for the new 3-story parish school of the Church of Our Lady of Good Counsel at Madison and Putnam Sts. Brooklyn. Approximate cost is $100,000.

ENGLEWOOD, N. J.—Plans for the New Bank Building are being entirely revised. A. Embury, 63 William St., New York, Arch.

NEWARK, N. J.—R. W. PATRICK, 78 South 9th St., Newark, N. J., has mason contract, and EUSTICE BROS., 45 Clinton St., Newark, N. J., have the carpenter contract for the $50,000 storage building at 20-22 Bridge St., Newark N. J., for the Alderney Dairy Co. Hooper & Co., 118 Market St., are Archs.

SECAUCUS, N. J.—C. F. Lang, 1 Montgomery St., Jersey City, N. J., is Arch. for new almshouse at Secaucus, N. J. W. H. Driscoll, 214 Clerk St., Jersey City, is Engr. Bids are being received by the Board of Freeholders at the Court House. Bids close Dec. 7, at 4 p. m. The building will have a front of 300 ft.; the shape of two inverted T's, with an oblong administration building in the centre.

HASBROUCK HEIGHTS, N. J.—Bids are asked until 8.30 p. m., Dec. 13, by Frank S. Flagg, Chn. Bldg. Com., Bd. Education, for building a 14-room brick school for this borough. Est. cost, $60,000. Walker & Morris, 24 East 23d St., New York, are the Archs.

HADDONFIELD, N. J.—Isaac Pursell, Arch., 119 South Fourth St., Philadelphia, Pa., is preparing plans for a church and Sunday-school for the Third Presbyterian Church, at Haddonfield, N. J.; cost, $60,000; 1 story; stone.

ALTOONA, PA.—Plans are being prepared by the Pennsylvania R. R. Co. for a new $100,000 freight station at Altoona.

OVERBROOK, PA.—The contract for the new six-division school building at 62d St. and Lebanon Ave., was awarded to W. G. SMITH, for $36,500.

LANCASTER, PA.—A site has been secured for the proposed Stevens Home at Lancaster. After the project receives the approval of the Governor, architects will be selected and plans will be drawn for a $150,000 building.

PITTSBURG, PA.—Plans have been completed for a $800,000 building for the Commonwealth Trust Co., on Third Ave., Pittsburg. Building will be brick, stone and terra cotta; 15 stories, 85 × 96 ft. Fred. J. Osterling, Times Bldg., Pittsburg, is Arch.

ALLENTOWN, PA.—Plans are in progress for the new Academy of Music to be erected at Sixth and Linden Sts., Allentown. The approximate cost will be $70,000; size, 65 × 120 ft.

PHILADELPHIA, PA.—Henry L. Reinhold, Arch., 1004 Chestnut St., Philadelphia, Pa., has invited bids for a store and apartment house at Broad and Arch Sts., for the Foerderer Estate; brick, 3 stories. Approximate cost, $50,000.

Ballinger & Perrot, Archs., 1200 Chestnut St., Philadelphia, are preparing plans for a one story stone church at 26th St., and Allegheny Ave., Philadelphia, for the M. E. congregation.

Plans are being prepared by Furness, Evans & Co., Archs., Provident Bldg., Philadelphia, Pa., for a church at 22d and Morris St., for The Prince of Peace Episcopal Church; one story, stone; $50,000.

John T. Windrim, Arch., Commonwealth Bldg., Philadelphia, Pa., is preparing plans for a telephone exchange at 1705-1707 South Broad St., for the Bell Telephone Co.; steel and concrete; 3 stories.

HANOVER, PA.—Herman Miller, Arch., 1420 Chestnut St., Philadelphia, Pa., is preparing plans for a bank for the Hanover Savings Fund Co. Granite and steel; fireproof; 2 stories. Cost, $100,000.

YORK, PA.—Plans are being prepared by Arch. C. A. Keyworth for a school; brick and stone; 2 stories; $40,000.

LANCASTER, PA.—Arch. C. E. Urban is preparing plans for a store and office building on Queen St., for E. S. Snyder. Brick and stone; 4 stories; $40,000.

Same architect is preparing plans for a church and Sunday-school for the Grace Lutheran Church; stone, 2 stories; $60,000.

ALLENTOWN, PA.—Archs. Jacoby & Welshampel, 514 Hamilton St., Allentown, Pa., are preparing plans for a $50,000 hotel for M. Gladstone, on Law and Hamilton Sts. Brick, 5 stories.

PHOENIXVILLE, PA.—Geo. Nattress & Son, Archs., 430 Walnut St., Philadelphia, Pa., have prepared plans for rebuilding St. Peters P. E. Church; steel, stone and concrete; fireproof, 1 story; approximate cost, $100,000.

PHILADELPHIA, PA.—It is reported that $100,000 will be spent in the erection of a Jewish theater in the vicinity of Fifth and South Sts., Philadelphia. Carl P. Berger is the probable architect.

PITTSBURG, PA.—The University Club is planning the erection of a $100,000 clubhouse, at Pittsburg. McClure & Spahr, Keystone Bldg., Pittsburg, Pa., are Archs.

PHILADELPHIA, PA.—Bids are asked until 11 a. m. Dec. 21, for construction, plumbing, heating, etc., of office building at Schuylkill Arsenal. Major Jno. T. Knight, Q. M. (Advertised, Engineering News.)

WASHINGTON, D. C.—THE BRENNAN CONSTRUCTION CO., 31st St. N. W., Washington, has been awarded the contract for an addition to the Holy Cross Academy; granite and steel, 3 stories; approximate cost, $100,000.

Glenn Brown, Arch., 806 17th St., N. W., Washington, D. C., has started plans for a residence for Joseph Beale. Brick and stone, 4 stories. Cost, $50,000.

HARRY WARDMANN, 717 14th St., N. W., Washington, D. C., has received the contract for an apartment house at 22d and N Sts., for C. F. Norment. Brick and stone, 4 stories.

JOHN S. LARCOMBE, 808 17th St., N. W., has been awarded the contract for a gymnasium for the Georgetown University. Brick and steel, 1 story, 50 × 100, costing $130,000.

WASHINGTON, D. C.—Bids are asked by Building Committee, B. T. Galloway, Chn., until 2 p. m., Jan. 5, for installation of heating, ventilation and special piping systems of two laboratory buildings, for U. S. Department of Agriculture. (Advertised, Engineering News.)

WASHINGTON, D. C.—Bids are asked by Building Committee, B. T. Galloway, Chn., until 2 p. m., Jan. 5, for the installation of electric and conduit systems of two laboratory buildings for U. S. Department of Agriculture. (Advertised, Engineering News.)

WASHINGTON, D. C.—Bids are asked by District Commissioners, until noon, Dec. 20, for construction of a public convenience station in Reservation 7. (Advertised, Engineering News.)

BALTIMORE, MD.—It is reported that a company headed by Frederick H. Gottleib, will spend $75,000 in improving the Old Music Hall, Baltimore, Md.

BALTIMORE, MD.—EASTMAN BROS. & CO., 910 Rector Building, Chicago, Ill., have been awarded contract for lathing and plastering on the new Custom House, Baltimore, Md.

NORFOLK, VA.—Bids are asked by Jamestown Exposition Co., until 4 p. m., Dec. 16, for the construction of the administration building of the Jamestown Exposition Co. (Advertised, Engineering News.)

RICHMOND, VA.—Archs. Wilson, Harris & Richards, Drexel Bldg., Philadelphia, Pa., are preparing plans for a Y. M. C. A. Bldg., at Richmond, Va. Brick and stone, fireproof, 4 stories, 60 × 100 ft. Cost, $60,000.

ELM GROVE, W. VA.—C. D. McCarty, Arch., Reilly Bldg., Wheeling, W. Va., has drawn plans for a 12-room brick school building for Elm Grove, W. Va. Cost, $40,000.

CHARLESTON, S. C.—Contract for union railway station has been awarded to GRANT WILKINS, of Atlanta, Ga., at $152,000. The other bidders were: Geo. B. Long, at $154,582; Moise De Leon, $158,700; H. C. Morrison, $163,520; Simons-Mayrant Co., $158,700; B. McKenzie, $163,880; W. J. Wilkins, $164,254; King Lumber Co., $169,970; H. T. Zacharias, $173,656; I. Jordan, $181,466. Plans were prepared by Frank Milburn, of Columbia, S. C.

SAVANNAH, GA.—Plans are in progress for a new $50,000 court house for Spaulding County.

MEMPHIS, TENN.—Jones & Furbinger, Archs., Memphis, Tenn., have drawn sketches for a contemplated 3-story and basement building, 75 × 75 ft., to be constructed of brick and stone. The owner is to be the new Medical Association of Memphis, Tenn. Building will cost not less than $60,000.

A site has been selected for the Y. M. C. A. for its new home at Madison and Dunlap Sts. Lot is 110 × 150. C. J. Haase is Chn. of Bldg. Com.

KNOXVILLE, TENN.—Bauman Brothers, Archs., have plans in progress for a large structure on Union Ave. and Prince St. Owner is M. B. Arnstein.

CHATTANOOGA, TENN.—The Colonial Theater Co., is having plans prepared for the erection of a new $100,000 theater at Norfolk, Va.

TOLEDO, OHIO.—The Lake Shore Railway Co. has plans for a new Union depot at Toledo, O. The new building will be approximately 800 × 400 ft. Cost, $1,000,000.

CLEVELAND, O.—The Elks are planning the erection of a new $100,000 building. D. J. Barry is Chn. Bldg. Com.

WELLSTON, O.—E. M. Ulrich, Arch., Cleveland, O., is preparing plans for a $65,000 church at Wellston, O., for St. Peter & St. Pauls Catholic Church.

CLEVELAND, O.—A Newsboys' Home is to be erected in Cleveland by John D. Rockefeller at a cost of $150,000. Dr. Chas. A. Eaton of Euclid Ave., Baptist Church of Cleveland, is also interested.

CINCINNATI, O.—Plans are in progress for a $500,000 school at Boymiller and Dayton Sts., 320 × 450 ft.

WOODSFIELD, O.—Plans and sketches will be received by the Building Committee up to Dec. 18 for a $150,000 court-house for Monroe County.

CHICAGO, ILL.—It is reported that the Knights of Columbus will erect a building on Michigan Ave., Chicago, costing about $1,000,000. John J. Ryan is the president of Central Chapter.

The Chicago Club is contemplating the erection of a new 10-story building at Michigan Ave. and Van Buren St. Cost may reach $1,000,000. Some preliminary plans will be submitted to the directors early in 1906.

A 3-story apartment house is to be erected by William Sear at 61st St. and Drexel Ave. at a cost of $100,000. Size, 84 × 202 ft.

Benjamin Marshall, 905 Cable Bldg., Chicago, has drawn plans for a "model theater" at 247 Michigan Ave., Chicago. It will be six stories and cost approximately $500,000.

CHICAGO, ILL.—Plans are in progress for an addition to the Auditorium Annex Hotel at Chicago, Ill. Addition will cost $2,000,000.

It is reported that J. K. Sebree will erect a new hotel at 110 to 114 Madison St., Chicago, at a cost of $100,000.

DULUTH, MINN.—The Duluth Board of Education has accepted the plans of German & Lignell for the new $50,000 school house.

FORT ASSINNIBOINE, MONT.—Bids are asked by Capt. J. B. McDonald, C. Q. M., until 11 a. m., Dec. 30, for construction of one brick cavalry stable for 73 horses; also for construction of bacterial sewage purification plant. (Advertised, Engineering News.)

DENVER, COLO.—The Supreme Court has decided that the City of Denver may issue bonds for an auditorium building to cost $400,000.

SALT LAKE CITY, UTAH.—JAMES RONAN, of Salt Lake City, Utah, has the contract for the $50,000 office building at Floral Ave. and Second South Sts. The building will be three stories, 81 × 120 ft., brick and stone. E. K. Moorman, 601 Majestic Bldg., Denver, Colo., is Arch. Dr. J. H. Hearon, Salt Lake City, is owner.

WATER SUPPLY—IRRIGATION.

The names of parties awarded contracts are printed in capital letters.

BRATTLEBORO, VT.—E. C. and E. E. Davis, Engrs., have made a report to the Special Village Committee on Water Supply, W. H. Vinton, Chn., on the local water supply. Various estimates of cost of waterworks were given.

PAWTUCKET, R. I.—A public hearing has been held by Council Committee on Water, Francis Chartier, Chn., on the report of Percy M. Blake, Consult. Engr., Newtonville, Mass., on the reconstruction of the city pumping system. The committee recommended the passage of a resolution appropriating $300,000 for the work. George A. Carpenter is Cy. Engr.

MIDDLETOWN, CONN.—Special meeting of Council has been held to consider advisability of expending $12,000 to $15,000 for erection of pumping station to take water from Connecticut River.

MALONE, N. Y.—Special election has been ordered for Dec. 12 to vote on issuance of $200,000 of bonds for buying or installing water-works.

SYRACUSE, N. Y.—We are advised that nothing will probably be done during the coming year towards erection of a system of water-works at the State Fair Grounds, Syracuse. S. D. Willard, Geneva, N. Y., is State Fair Comr.

TROUPSBURG, N. Y.—Company has been incorporated to put in gravity system of water-works here, according to reports. Cass Griggs, J. H. Sanford and Byron Jones are interested.

NEW YORK, N. Y.—Following bids were opened Nov. 29 by John T. Oakley, Commissioner Water Supply, Gas and Electricity, for (1) furnishing, delivering and laying water mains in several streets of the Borough of Manhattan and The Bronx; and (2) for furnishing, delivering and laying water mains in Green, Newell, Amsterdam and other streets, Boroughs of Manhattan and The Bronx: Louis D. Gregory, 125th St. and 1st Ave., New York, (1) $94,058, (2) $20,058; Clinton Beckwith, 49 West 27th St., New York, (1) $101,183, (2) $23,304; Wilton Construction Co., 115 Elliott Ave., Williamsbridge, New York, (1) $93,532, (2) $20,742; Jno. Cornwell, 69 E. 127th St., New York, (1) $93,532, (2) $21,400; M. O'Brien, 1909 Amsterdam Ave., New York, (1) informal, (2) $21,079; M. D'Ambra Co., 205th St. and Villa Ave., New York, (1) $100,621, (2) $25,779.

ASBURY PARK, N. J.—Following bids were opened Nov. 27 by this city, Jno. L. Coffin, Supt. W. W. and Sewers, for erecting 200 HP. internal furnace tubular boiler, (1) being gross bid, (2) allowance to city for two old boilers and (3) net price: A. D. Granger Co., 95 Liberty St., New York, (1) $4,279, (2) $200, (3) $4,079; Cleveland Steam Boiler Works, Cleveland, O., (1) $3,600, (3) $3,600; Penna. Engineering Co., 806 Perry Bldg., Philadelphia, (1) $1,3660, (2) $250, (3) $3,410; Howard W. Read, Third and Arch Sts., Philadelphia, Pa., (1) $3,460, (3) $3,460; Lenher Engineering Co., 39 Cortlandt St., N. Y., (1) $2,990, (3) $2,990; DAVID C. SEYMOUR, 49 Lawrence St., Newark, N. J., (1) $3,030, (2) $100, (3) $2,930 (awarded contract).

GIBBSTOWN, N. J.—Jacob Allen, Gibbstown, is interested in the construction of water-works here, and would like to get into correspondence with parties that build water systems.

AVALON, N. J.—Bids are asked by Borough Council until 1.30 p. m., Dec. 21, for furnishing and laying 7,000 ft. of 4-in. cast iron water pipe. Bids are also asked for street grading and concrete curbing under Contracts 10, 11, 12, requiring about 13,000 ft. of curbing. (Advertised, Engineering News.)

SANDY LAKE, PA.—Borough Council is considering purchase of local water-works.

ALBION, PA.—Estimates have been submitted to Borough Council for installation of gravity water system to cost about $19,000. George Fenkell, Erie, Pa., is Engr.

PHILADELPHIA, PA.—Council Finance Committee may recommend a $45,000 appropriation, to be used for supplying city water to Bustleton.

WASHINGTON, D. C.—Bids are asked by District Commissioners, until noon, Dec. 30, for furnishing and erecting a vertical, triple expansion, crank and flywheel, condensing pumping engine of a capacity of about 30,000,000 gallons per 24 hours. (Advertised, Engineering News.)

NORFOLK, VA.—We are informed that contract for all the inside work water system Marine Barracks, Norfolk Navy Yard, has been let to PENN BRIDGE CO., Beaver Falls, Pa., for $11,900. Bids were opened Nov. 10.

RICHMOND, VA.—Bids are asked by Chas. E. Bolling, Supt. W. W., until 5 p. m., Dec. 14, for furnishing sluice gates, guides, lifting stems and standard floats and all parts and materials necessary for their erection complete, for the different openings in the walls of the subsiding and coagulating basins.

SHENANDOAH, VA.—Water-works are to be installed for this city.

LAURINBURG, N. C.—Election is reported to have been called for Dec. 11 to decide on installing water-works.

RICHLAND, GA.—A $15,000 bond issue for water-works and electric light plant has been voted.

LIVE OAK, FLA.—City voted Nov. 21 to issue $15,000 of water-works bonds. S. P. Mays is Cy. Clk.; M. E. Broome is Mayor.

ARCADIA, FLA.—We are advised that nothing has been done as yet toward waterworks. A $35,000 bond issue, part of which was for water-works, is reported to have been disposed of.

BREVARD, N. C.—See under Sewerage.

TUSCALOOSA, ALA.—It is reported that new company is to apply for franchise here, with intention of buying old plant and extending it.

MACON, MISS.—City has voted to issue $10,000 additional bonds for extensions to water system. New filter and [illegible] pipe are to be installed.

SHELBY, MISS.—Mayor and [illegible] of Aldermen are reported to have [illegible] of water-works and sewerage [illegible] $25,000

MINDEN, LA.—We are advised that no plans have yet been prepared for the equipment of the city water-works [illegible] meters. F. H. Drake, Chn. W. W. Com. [illegible] official in charge. Robert Roberts is Mayor.

BRISTOL, TENN.—Council is reported to have called off the projected election to vote on proposition to pay $150,000 for the water-works of the Bristol-Goodson Co. [illegible] is now said that a new franchise will be granted the water company, and that the company will secure a new supply.

LEITCHFIELD, KY.—City may install water-works.

CLEVELAND, O.—Specifications (with plan attached) for furnishing two 2,000,000 gallons pumping engines for the city water-works, may be seen at the New York and Chicago offices of Engineering News. Bids are asked until Dec. 18, as was advertised in our issue of Nov. 30.

ROSEVILLE, O.—Southeastern Ohio Railway, Light & Power Co., which proposes to build a traction line to Sayre passing through Roseville and Crooksville, is stated to be considering a proposition to supply those two towns with water. The company, in which Col. C. B. Hart, Wheeling, W. Va., is interested, proposes to build dam across Jonathan Creek at Powells Mills, and then to pipe the water to the towns. The Muskingum Water Co., C. U. Shryrock, Pres., Zanesville, O., is also considering supplying Roseville and Crooksville, and has acquired dam and water rights on Jonathan Creek, near Fultonham.

DELPHI, IND.—City is taking bids on furnishing 100 water meters. John W. Fawcett, Cy. Clk. (Advertised, Engineering News.)

MONROE, WIS.—W. W. Churchill, of Westinghouse, Church, Kerr Co., New York, has made report to Mayor Willis Ludlow on cost of constructing new water-works for this city. According to the report a new system could be put in for $65,000. Cost of present private works is estimated at $60,843.

BURT, IA.—We are advised that an election will be held Dec. 12 to vote on issuing bonds for water-works. Contracts will not be let until spring. F. Delmert is Mayor.

WATERLOO, IA.—M. B. Locke, Kansas City, Mo., is reported to have submitted proposition to Council whereby he proposes to furnish city with deep well or artesian water for a period of 25 years.

DULUTH, MINN.—It is probable that at election, Feb. 6, question of issuing $200,000 of bonds will be voted on. Of this sum $40,000 would be for new pumps and $90,000 for the "hill system" of water-works. L. N. Case is Supt. W. W.

SLEEPY EYE, MINN.—Bids are asked by City Council, until 8 p. m., Dec. 15, for labor and materials for erecting steel tank and laying three blocks of 6-in. cast iron water mains, three hydrants, specials, etc. A. Davey, Cy. Recdr.

ARKANSAS CITY, KAN.—At special election Nov. 21, city voted against issue of $20,000 of water-works improvement bonds.

LINCOLN, NEB.—Geo. L. Campen, Cy. Engr., estimates cost of new pump, which is soon to be purchased by the city, at $16,000.

BILLINGS, MONT.—Bids are asked by the Engineer, U. S. Reclamation Service, Billings, until 2 p. m., Jan. 15, for the construction of Division 1, main canal, Huntley Project, including three tunnels, involving the excavation of about 75,000 cu. yds., some rock excavation, about 2,500 ft. of tunnels, and 3,000 cu. yds. concrete. Work is to be done at a point about ten miles from Billings. Plans and specifications may be seen at office of Engineering News, 220 Broadway, New York. (Advertised, Engineering News.)

ST. LOUIS, MO.—The Mayor has signed the following bills: Appropriating $100,000 to purchase meters for the distributing system of the water department; appropriating $285,000 for the extension of distribution and the purchase of pipe for the water department.

BALLINGER, TEX.—We are informed that bonds for construction of city water-works have not been sold as yet. No contracts will be let until after January, 1906. J. W. Powell is Mayor.

SHERMAN, TEX.—We are advised that about $10,000 will be spent for extending water mains. Chas. E. Haydon is Cy. Engr.

TEMPLE, OKLA.—We are advised that Temple Water Co., recently incorporated, has awarded contract for its water-works, and has ordered necessary supplies. Est. cost is $10,000. Some meters may be needed. J. C. Tandy is interested.

PERRY, OKLA.—Council has decided to issue $25,000 of bonds for water-works improvements.

DAVIS, IND. T.—We are advised that contract for constructing water-works for this place, bids opened Nov. 28, has been awarded to W. W. COOK & SONS, Junction City, Kan., for $23,200. Work includes a 35-ft. deep, 10-ft. diameter well, a pump pit, power house, compound duplex pumping engine of 400 gallons capacity per minute, tubular return flue type boiler, water heater, duplex boiler, feed pump, 40 two-way post fire hydrants, two 8-in., four 6-in. and eight 4-in. double gate valves, 4,000 ft. 8-in., 4,000 ft. 6-in., and 12,000 ft. 4-in. standard cast iron mains and five tons special castings, and 50,000-gallon steel tank, mounted on 110-ft. steel tower. W. P. Bullock, Engr.

LYONS, COLO.—Preliminary surveys for a large storage reservoir have been filed with the State Engineer. It is proposed to build a dam across the St. Vrain River, to be 260 ft. high and [illegible]00 ft. long, the water obtained to be used for irrigation purposes on the high land west and north of Longmont and Fort Collins. The project is said to contemplate the expenditure of about $3,000,000. J. C. Working, Lyons, is interested.

BOULDER, COLO.—Election has been called for Dec. [illegible] to vote on purchase of certain water, reservoir and ditch rights, to be used for the improvement and enlargement of the city water-works. J. P. Maxwell is Cy. Engr.; Eugene Wilder is Cy. Clk.

SOCORRO, N. MEX.—See under Light and Power Plants.

ROSALIA, WASH.—Town Council has adopted proposed plan for water system here, and matter was to be voted on Dec. 5.

PASCO, WASH.—Town may issue bonds for installing water-works.

TWISP, WASH.—Permanent location survey for projected high line irrigation canal has been completed. Canal will be 22 miles long and will supply water for irrigation of 4,500 acres. Supply will also be furnished to Twisp. Contracts for materials and construction work are to be let soon. M. B. Garrett, Spokane, Wash., was Engr.

SEATTLE, WASH.—Priest Rapids Irrigation & Power Co., capitalized at $250,000, has been incorporated for the reclamation of 32,000 acres of arid land in Benton County. It is proposed to pump water from the Columbia River at Priest Rapids. Electric power will be generated at the rapids for pumping and other purposes. C. J. Smith, M. B. Haynes, E. S. McCord and Judge C. H. Hanford are interested.

EUGENE, ORE.—Willamette Valley Co. has acquired works of Eugene Water Co., and will, it is said, exepend $20,000 for new reservoir and improved pipe lines. E. W. Hall is Mgr.

CLOVERDALE, CAL.—City has acquired local water-works, and will enlarge and improve it.

STOCKTON, CAL.—Stockton Water Co., John A. Britton, Pres., San Francisco, Cal., is said to be planning to erect a new reservoir here to cost $100,000.

WOODLAND, CAL.—We are advised that a contract for furnishing material and erecting steel tank and tower in this city was awarded Nov. 20 to THE GOLDEN WEST IRON WORKS, San Francisco, for $5,226. P. N. Ashley is Cy. Engr.

SAN DIEGO, CAL.—Southern California Mountain Water Co., B. M. Warner, Gen. Supt., is reported to be receiving bids until Dec. 20 for the construction of about 17 miles of pipe line, reservoir, etc. Est. cost of work is $400,000.

GOLDFIELD, NEV.—F. M. Ish, J. S. Cook, C. F. Pugh and others have obtained a franchise to pipe water into Goldfield from the Highland Mine at Diamondfield. A reservoir will be built on Columbia Mountain and a high pressure gravity system will be used.

SALT LAKE CITY, UTAH.—West Mountain Canal & Irrigation Co. has adopted articles of incorporation fixing its capital stock at $450,000. Company has filed on 200 second ft. of water from Utah Lake, and will raise water to a level of about 175 ft. by pumping plant, pipe line, etc. C. M. Nokes, Riverton, Utah, and Hugh J. Cannon, Salt Lake City, are interested.

WELLINGTON, UTAH.—Willow Creek Reservoir Co., capitalized at $10,000, has been incorporated. Water will be supplied to this place as well as for irrigation. Geo. B. Milner is Pres.; Edgar Thayne is Secy.

SALT LAKE CITY, UTAH.—Following applications for water appropriations have been filed with the State Engineer: E. G. Hunter, American Fork, Utah, 3 second ft. from Green River, diverting canal 15,000 ft. long; T. Brandon, Castle Dale, Utah, F. W. Bench, Manti, Utah, and others, 8 second ft. from Green River, diverting canal 42,000 ft. long; John Glenn, Vernal, Utah, and others, 6 second ft. from Green River in Uintah County, diverting canal 79,000 ft. long.

NAMPA, IDAHO.—City has voted to issue $15,000 of water-works bonds.

TROY, IDAHO.—City is to vote Dec. 12 on issuing bonds for water-works.

BOISE, IDAHO.—King Bros., Boise, are reported to be making surveys for an irrigation project which proposes to water 150,000 acres of land from storage reservoirs in Blaine and Lincoln Counties. Samuel D. Boone, Hailey, Idaho, is interested.

DEMPSEY, IDAHO.—Lava Irrigation Co., capitalized at $10,000, has been incorporated by Frank Zamboul, Truxton Ramsey, and others.

PARMA, IDAHO.—J. L. Watkins, C. C. Ball, Robert Brown and others, residents of this place, have incorporated McConnell Island Ditch Co. for irigation purposes.

RAINY RIVER, ONT.—It is probable that water-works will be constructed here at an est. cost of $33,000.

LONDON, ONT.—Bylaw asking for $145,000 for a second main from Springbank and for necessary extensions in the city will be voted on.

VANCOUVER, B. C.—At next election matter of issuing about $1,500,000 of bonds may be voted on. Part of this sum will be for extension of water-works.

SEWERAGE.

The names of parties awarded contracts are printed in capital letters.

SALEM, MASS.—Sewerage Commissioners are stated to have awarded contract for pumping station to PITMAN & BROWN, Salem, and contract for station equipment to CARL B. PATTEN, Salem. Total cost is about $35,000. F. A. HOUDLETTE & SON, [illegible] Broad St., Boston, Mass, were awarded contract for iron pipe to make connections.

PLAINFIELD, CONN.—Preliminary surveys have been practically completed for sewer and drainage systems for this town. M. J. Unklebach, New Britain, Conn., is Engr.

ROCHESTER, N. Y.—Residents of the White City, Summerville and the lake beach at Irondequoit are discussing matter of sewer system and water supply. John Skinner, City Engineers' Department, Rochester, is interested.

SEA ISLE CITY, N. J.—Local Board of Trade is advocating municipal ownership of the sewer system.

PATERSON, N. J.—Aldermen have appropriated $10,000 for the purpose of employing an expert engineer to investigate sewage disposal of the city.

HAZELTON, PA.—Surveys have been made for sewers in Hazle, Juniper and Walnut Sts.

WILLIAMSPORT, PA.—Extension of sewer in Grafius Run, from Pine to Market St., is under consideration.

NORTH WALES, PA.—E. K. Freed & Co. are asking franchise here for laying sewer mains and constructing settling beds. Est. cost of the sewer system is about $50,000.

CARLISLE, PA.—We are advised that this borough is looking for general information on sewerage. Matter of constructing system would have to be voted on before anything could be done. James Porter is Boro. Engr.

HARRISBURG, PA.—Bids are asked by W. H. Lynch, Comr. Highway Dept., until noon, Dec. 9, for construction of sewer in Six-and-a-Half St., and in Forrest St.

PETERSBURG, VA.—Bids are asked by Committee on Sewers, Sidewalks and Water Mains, care R. D. Budd, Cy. Engr., until noon, Dec. 18, for construction of about six miles of terra cotta pipe sewers.

BREVARD, N. C.—We are advised that contract for constructing sewer and water lines for this city, bids opened Nov. 20, has been awarded to LEROY BALL, Asheville, N. C. Work consists of furnishing all material and laying 7,000 ft. of 8-in., 5,800 ft. of 6-in. and 75 ft. of 15-in. terra cotta pipe; also furnishing all material and laying 5,500 ft. of 4-in. water pipe; 16 fire hydrants, 5 4-in. gate valves, 2 6-in. gate valves and 7 valve boxes. T. S. Boswell, Ch. Engr., is official in charge.

MILLEDGEVILLE, GA.—Plans and specifications are under way, and bonds have been voted, for proposed sewer system for this city. Julius A. Horne is Mayor.

LIVE OAK, FLA.—We are advised that city has voted to issue $35,000 of bonds for sewerage. Wm. W. Lyon, Palatka, Fla., is Engr.; S. P. Mays is Cy. Clk.

AKRON, O.—Following bids were received Nov. 28 by Board Public Service, C. H. Watters, Secy., for constructing sewer in Voris, Miami and Thornton Sts.: John O'Neil, $3,965; Hunt & Wigley, $3,826; E. McShaffrey & Son, $4,417; McAlonan Bros., $4,394; McGarry & McGowan, $4,052; S. W. Parshall, $4,695; Chas. Ruhlin, $4,840; all bidders of Akron. Work includes 1,100 lin. ft. 4-ft. brick sewer, 8 manholes, 12 catch basins, 200 ft. 15-in. sewer pipe, 150 ft. 20-in. sewer pipe, 100 ft. 24-in. sewer pipe.

ELYRIA, O.—We are advised that contract for constructing East Side trunk sewer has been let to PRICE & HURLEY, Marion, O., for $37,218. Bids were opened Nov. 13 by Board Public Service, Scott Hinman, Clk. Itemized bids will be given under Contract Prices.

CINCINNATI, O.—Bids are asked by Board Public Service, Geo. F. Holmes, Clk., until noon, Dec. 27, for labor and materials for constructing sewers and drains in McMillan St., between Ingleside Ave. and Humboldt Ave.; Hackberry St., from McMillan St., 300 ft. north, and Humboldt Ave., from Cleinview Ave. to Columbia Ave., being part of Division 12.

CLEVELAND, O.—Bids are asked by Board Public Service, A. R. Callow, Secy., until noon, Dec. 12, for construction of sewers in parts of ten streets. Bids will likewise be opened at noon, Dec. 14, for the construction of sewers in ten streets.

SOUTH BEND, IND.—Bids are reported asked by Board Public Works until 10 a. m., Dec. 20, for the construction of a trunk sewer in Kenwood Ave. and Meade St.

DELRAY, MICH.—Following bids were opened Nov. 27 by City Council for a sewer to drain that portion of Delray now undrained from Louis Ave. to the city limits; E. P. Adams & Co., $21,840; Julius Porath, $23,300; J. A. Mercier, $23,800; Langley & Jaynes, $24,000; J. Jaynes, $24,124; Sheehan & Co., $24,860.

EAST ST. LOUIS, ILL.—A $758,000 concrete sewer system will probably be constructed this spring by this city. W. J. Crocken is Cy. Engr.

OELWEIN, IA.—Ordinance has been introduced in Council providing for sanitary sewer system for this city.

ST. PAUL, MINN.—Contract for constructing sewer in Jenks St., from Arkwright to Mississippi St. has been let to THOMAS KEOUGH, for $2,600.

ST. LOUIS, MO.—Bids were opened Nov. 24 by Board Public Improvements for construction of three sewers, the lowest bidders being as follows: Tamm Ave. sewer district No. 1, McIntyre-Teese, $15,716; Cherokee sewer No. 11, Fred. Hoffmann Construction Co., $1,118; Tamm Ave., public sewer, John F. McMahon, $1,644.

KANSAS CITY, MO.—Public Improvement Committee has awarded contracts for sewer work as follows: Gillham Road sewer from 39th St. to Brush Creek, PARKER-WASHINGTON CO., 2309 Penn St., Kansas City, $120,477; sewer from Grove St., on 15th St., to connection with Blue River, W. C. MULLINS, 515 Colorado Ave., Kansas City, $154,708; sewers from 35th St. and Troost and 39th St. and Harrison, BOYD CONSTRUCTION CO., 315 American Bank Bldg., Kansas City, $30,779.

FORT ASSINNIBOINE, MONT.—See under Buildings.

HOULTON, ORE.—We are advised that no definite steps have been taken as yet for sewer system for this town. N. A. Perry is Mayor.

OCEAN PARK, CAL.—Election is to be held Dec. 11 to vote on bonding for $50,000, part of which sum will be for sewers.

SAN JOSE, CAL.—We are informed that city will vote Dec. 12 on issuing $175,000 of bonds for sewer extensions. Roy E. Walter is Cy. Clk.

VISALIA, CAL.—City was to vote Dec. 7 on issuing $15,000 of bonds for sewer work. M. J. Byrnes is Cy. Clk.

SAN FRANCISCO, CAL.—Board Public Works has awarded contract for construction of a sewer in California St., from 24th to 31st Ave., to EUREKA CONSTRUCTION CO., for $22,744.

NAMPA, IDAHO.—City has voted to issue $12,000 of bonds for sewers.

VANCOUVER, B. C.—City will vote at next election on issuing $1,500,000 of bonds, part of which will be for sewers.

KINCARDINE, ONT.—Bids are asked by J. H. Scougall, Town Clk., until Dec. 18, for the construction of a sewer system.

GARBAGE DISPOSAL.

The names of parties awarded contracts are printed in capital letters.

JERSEY CITY, N. J.—The Street and Water Board on Nov. 27 awarded to HENRY BYRNE the contract for street cleaning for the fiscal year, which began on Dec. 1. His price was 98% of standard.

ROCHESTER, N. Y.—The Board of Contract has awarded contract for garbage collection for 1906 to W. A. HARTUNG, at $35,685.

WILMINGTON, DEL.—Committee appointed by city council is now investigating plan for a new disposal of garbage.

LEXINGTON, KY.—Specifications for the construction of a garbage destructor (or incinerator) for this city may be seen at office of Engineering News, 220 Broadway, New York. Plant is to have a capacity of 50 tons of garbage and trash in 24 hours. Bids are asked until Jan. 4, as is stated in our advertising columns.

CHICAGO, ILL.—J. M. Patterson, Comr. Public Works, has received an offer from the C. Turner Company to reduce the city's garbage for $120,000 a year, the city to collect and deliver. The lowest bid before the finance committee is that of Darling & Co to collect and reduce the garbage for $743,000 a year. Noted fully last week.

DETROIT, MICH.—Specifications are on file at office of Engineering News, New York for proposed municipal garbage disposal plant. Bids are asked until Dec. 11, 11 a. m., for disposal plant or plants, and also for disposal of garbage by a contractor upon the basis of a one, three, five or ten year contract. F. A. Blades is Controller. Noted last week.

A report from Washington, D. C., states that on Nov. 27 the Supreme Court, in decisions announced by Justice Harlan, sustained the validity of the garbage collection and destruction ordinances of the cities of San Francisco and Detroit. By removing this garbage, the court held no private property was taken for public uses; it constituted only the destruction of a nuisance.

OCEAN PARK, CAL.—An election will be held on Dec. 11 to vote on issuance of $50,000 of bonds, of which $10,000 are for garbage plant. T. G. Smith is Cy. Clk.

STREETS AND ROADS.

The names of parties awarded contracts are printed in capital letters.

HARTFORD, CONN.—On November 29th the Board of Contract and Supply awarded contract for grading on Albany Ave. in connection with the elimination of a grade crossing there to RICHARDS & GASTON, 143 Liberty St., New York City, at $19,096. The other bidders were as follows: Edward Balf Co., $22,795; F. B. & W. H. O'Neil, $19,963; Daniel O'Connell's Sons, Holyoke, Mass., $21,301. The work is to complete a contract awarded some time ago and subsequently abandoned, and calls for the excavation of about 33,000 cu. yds. of earth and the carting of about 6,000 cu. yds.

SYRACUSE, N. Y.—Bids are asked until Dec. 11 by Board of Contract and Supply for paving portions of several streets. George J. Metz is Cy. Clk. Noted on Nov. 23.

NEW YORK, N. Y.—Bids are asked until 11 a. m., Dec. 12, for grading, curbing and repaving with wood block pavement on a concrete foundation Union Ave. from Broadway to Charles Place; and Third Ave., from First St. to 13th St., College Point, Boro. Queens. Joseph Cassidy, Pres., Boro. Queens.

Bids are asked until 11 a. m., Dec. 13, for paving with asphalt on several streets in Borough of Brooklyn. Martin W. Littleton, Boro. Pres.

EASTHAMPTON, N. Y.—The Brooklyn "Eagle" states that $200,000 will be expended for road improvement in the towns of Easthampton and Southampton within the next six months. The sums have been raised and will be expended as follows: For 19 miles of Peekskill gravel road through Easthampton town, $100,000 raised by bonding, $2,000 private subscription, $3,000 regular road appropriation; for 25-mile speedway in Southampton town, $12,000 private subscription, $7,000 special town appropriation, $2,000 special Sag Harbor village appropriation; regular Sag Harbor and Southampton village road appropriations, $10,000; regular Southampton town appropriation, $25,000; work subscribed by farmers, $10,000. William H. Pierson, of Water Mill, will superintend the work in Southampton town. In Easthampton the town board will meet this week and appoint a civil engineer to take charge of the work.

BROOKLYN, N. Y.—According to the New York "Tribune," the Board of Estimate on Nov. 24 adopted a resolution requesting the Corporation Counsel to start condemnation proceedings at once for a park at Owl's Head, on the Shore Road, Brooklyn. The estimated cost of the land to be purchased is $1,000,000. At the same sitting the board ordered an issue of corporate stock of $1,875,000 to improve and complete the Bay Ridge Parkway and Shore Road from First Ave. to Fort Hamilton, Brooklyn, and an appropriation of $264,000 for turning Seventh Ave. into a boulevard from 110th St. to 153d St., New York.

AVALON, N. J.—See Under Water Supply—Irrigation.

PERTH AMBOY, N. J.—Bids are asked until Dec. 18, 8.30 p. m., for grading of Kirkland Place. Wm. Fullerton, Street Comr.

ERIE, PA.—Next year it is planned to pave or resurface a number of streets.

PITTSBURG, PA.—Bids are asked until Dec. 13, 10 a. m., by Edward M. Bigelow, Dir. Dept. of Public Works, for grading and curbing and paving with asphalt various streets, also for sewer work.

HUNTINGTON, W. VA.—City will award contract for 100,000 sq. yds. of vitrified brick paving, with cement curb and gutter. Est. cost, $150,000. John H. Sanborn is Cy. Engr.

ASHEVILLE, N. C.—We are advised that contract for 5,000 sq. yds. of bitulithic pavement on Grove and Phillips Sts. has been awarded to WARREN BROS. CO., of Boston, Mass.

LIVE OAK, FLA.—City has voted to issue $75,000 of bonds for paving streets. S. P. Mays is Cy. Clk.

MOBILE, ALA.—Two bids were received on Nov. 23 by Board of Public Works for repairing Water St., from St. Michael St. to Government St., as follows: Asphalt Paving Co., of Georgia, $7,421; Southern Paving & Construction Co., of Chattanooga, Tenn., $7,810.

KNOXVILLE, TENN.—Bids will be asked at once for paving improvement districts 1, 2, 4 and 5, aggregating about 50,000 yds. of paving. W. H. Gass is Mayor.

LEXINGTON, KY.—ABEE & EDWARDS, Hickory, N. C., have been awarded contract for paving between 1,500 and 2,000 sq. yds. of brick pavement at 75 cts. a sq. yd. J. L. Ludlow, Winston-Salem, N. C., is Engr.

CINCINNATI, O.—Bids are asked until Dec. 19, noon, for construction of artificial stone sidewalks in the eastern and western sidewalk districts. George F. Holmes is Clk. Board of Public Service.

COLUMBUS, O.—We are advised by Julian Griggs, Ch. Engr. Bd. of Public Service, that bids were received on Nov. 28 for street paving. Lowest bidders were as follows: Lazelle St., Frank J. Fisher, Columbus, $1,026; Frank J. Fisher, Wall St., $1,858; Frank J. Fisher, Pearl St., $2,002; M. J. Burns, 272 North Fifth St., Columbus, Spring St., $1,076; Harry J. Shaw, Columbus, for Dennison St., at $12,700.

ELYRIA, O.—Bids are asked until Dec. 26 by Frank R. Fauver, City Auditor, for purchase of $18,000 bonds for grading, draining, curbing and paving Middle Ave.

MICHIGAN CITY, IND.—Several streets will be paved with brick. Address City Engineer.

LAPORTE, IND.—It is reported that Laporte County will vote upon plan to macadamize about 25 miles of highway.

PEORIA, ILL.—It is estimated that it will cost $24,661 to pave North Jefferson Ave. with brick and $16,382 to pave Glen Oak Ave. with brick.

EAST ST. LOUIS, ILL.—We are advised that the contract for improving that part of St. Clair Ave. in Stites Township, St. Clair Co., has been awarded to the HILL-GAYNORD CONS. CO., of East St. Louis, Ill. The following is the detail of bid received: 1,675 ft. 18-in. pipe sewer, $1,424; 1,650 ft. limestone curb, $990; 1,850 cu. yds. excavation, $648; 2,000 sq. yds. vitrified brick paving: Wabash brick, $3,040; Albion brick, $2,900. It has not yet been decided which brick will be used. W. J. Crocken, Cy. Engr., of East St. Louis, will have charge of the engineering work. Wm. West is Chn. of the Board of Highway Comrs., Lovejoy, Ill.

GRAND RAPIDS, MICH.—The Common Council has requested the Board of Public Works to approximate an estimate of grading and repaving with asphalt blocks of Bostwick St. from Park St. to Lyon St.

CORYDON, IA.—STOBLER & FISHER have been awarded contract for constructing a turnpike, at $11,397.

WINONA, MINN.—Citizens have contributed $25,000 for construction of a macadamized driveway around Lake Winona next year. It will be eight miles long, it is said, and 20 ft. in width on south side of the lake. The work will be undertaken by a committee, the officers of which are as follows: Pres., Charles Horton; vice-Pres., A. B. Youmans; Secy., H. C. Garvin; Treas., Frank Horton; Executive Committee, Charles Horton, H. C. Garvin and E. K. Tarbell. In consideration the city council has agreed to macadamize the west end of Broadway, making a complete circuit of macadamized streets.

KANSAS CITY, MO.—Park Board has awarded contract for grading and sewer work in Roanoke Road, Roanoke Park, to N. H. COMSTOCK, at $6,120.

PINE BLUFF, ARK.—West Fourth St. will be paved with macadam at cost of about $40,000. John P. Harper is Cy. Engr. Noted on Nov. 16.

SHERMAN, TEX.—Bids are asked until Dec. 18 for paving portions of several streets with vitrified brick, asphalt or bitulithic pavement. Est. cost, $28,000. Charles E. Haydon is Cy. Engr.

SEATTLE, WASH.—Bids were received on Nov. 18 for street improvement. The lowest bids received were as follows: 27th Ave. south, Yesler way to Main, concrete walks, D. Dowie, $1,790; Sixth Ave. north, concrete walks, Sparger Concrete Co., $21,571; 32d Ave., grading, P. J. McHugh, $11,214. Federal Ave. and East Garfield, sewer, T. I. Peterson, $2,588; Gilman Ave., planking, L. H. Goerig, $5,325.

NIAGARA FALLS, ONT.—Bids are asked, it is reported, until Dec. 14 for constructing brick roadway. John Robinson is Cy. Clk.

READERS' WANTS

Our readers, and others, who are in the market for supplies, machinery, etc., or to award contracts for work, will nearly always find the names of the firms who handle the material they want by referring to our advertising pages. Our advertisers are constantly changing their cards, and for this reason we advise our readers to look over the paper from the front cover to the back cover so as to keep in touch with up-to-date contractors' material, methods, etc. **Mention Engineering News** when writing our advertisers. If, however, you do not find advertised just what you want please write us at once and we will notify the proper firms without delay, and **without charge.—Engineering News can help buyers.**

REFRIGERATING MACHINERY.—Collins, Miss.—Hollis & Riley, of Collins, are reported in the market for machinery, etc., for a cold storage plant.

SAWMILL MACHINERY.—Norfolk, Va.—The Norfolk Hardware Co., of Norfolk, Va., and J. T. Blount & Co., of Pittsboro, N. C., are reported in the market for the above.

CONCRETE WORK.—Fort Wayne, Ind.—The Kerr Murray Mfg. Co., writes us that information is wanted by W. D. Birbeck regarding concrete buildings for manufacturing purposes.

SUBMARINE CABLE.—Georgetown, S. C.—W. T. Turbeville, Mgr. Home Tele. Co., is understood to be in the market for 3,000 ft. of submarine cable and 90 miles of copper wire, etc.

TRUCKS FOR HOUSE MOVING.—Montreal, Que.—W. H. C. Mussen & Co., P. O. Box 2344, write us that they want the names of makers of house-moving trucks and equipment.

ROOFING MATERIAL, ETC.—Owensboro, Ky.—The Miller Brick & Tile Co., is understood to be in the market for considerable roofing material, water tank, and three smokestacks.

MACHINE TOOLS.—Raleigh, N. C.—It is stated that the Raleigh Iron Works is in the market for all kinds of machine tools for its new works, as is also the Southwestern Iron Co., of Guthrie, Okla.

APPARATUS FOR FLUE GAS ANALYSIS.—Joplin, Mo.—H. R. Conklin, of the Mo. Lead & Zinc Co., of Joplin, writes us for the names of firms making a suitable apparatus for flue gas analysis in steam boiler plants.

WOODWORKING MACHINERY, ETC.—Burlington, N. C.—It is stated that the Petty Machine Co., of Burlington, N. C., D. W. Johnson, Passover, Ga., and the Gibbes Machine Co., 804 Gervais St., Columbia, S. C., are in the market.

WATER-WORKS AND SEWER SUPPLIES.—Tacoma, Wash.—H. J. Fuller, M. Inst. C. E. I., Consulting Engineer, will be glad to receive catalogues covering water supply, power development, gas and kindred matters. 502 N. Cliff Ave., Tacoma, Wash.

WATER GAGE.—Monessen, Pa.—The Monessen Water Co., H. D. McCabe, Supt., writes us that he wishes to know if there is any device in the market for indicating the flow of water in pipes under pressure. The company has a main entering the filter plant, on which it is desired to attach such a device, indicating the velocity fluctuations.

CEMENT WORKING AND MIXING MACHINERY, STONE CRUSHING MACHINERY, CEMENT, CRUSHED STONE, ETC.—Philadelphia, Pa.—The Philadelphia Concrete Co., Room 420 Land Title Bldg., writes us that catalogues are wanted partly for immediate use and partly for reference and filing from manufacturers of the abovementioned supplies.

MACHINERY FOR BUILDERS, BUILDING EQUIPMENT, MINING, ETC.—Los Angeles, Cal.—Hugh L. Boxall, C. E., 814 Braly Bldg., Los Angeles, writes us that he wishes to receive catalogues from firms making machinery for architectural construction, civil and mechanical engineering especially in connection with electric power plants, compressed air equipment, hydraulic engineering, etc.

MANUFACTURING PLANTS.

The names of parties awarded contracts are printed in capital letters.

BOSTON, MASS.—W. A. & H. A. ROOT, 166 Devonshire St., Boston, have been awarded the contract for additions to the brick factory of the Gillette Safety Razor Co., South Boston. Bids closed Dec. 1, 1905. Cost, $65,000. Kendall, Taylor & Stevens., Archs., 93 Federal St., Boston.

Bids have been received by M. D. Safford, Arch., A St., South Boston, for construcing a factory building in South Boston, to cost about $125,000, for W. T. C. Macallen Co., 388 Congress St., Boston; contract not awarded at this writing.

GEO. W. HARVEY CO., 24 Milk St., Boston, has been awarded the contract for constructing an addition to the storage warehouse of the New England Storage Warehouse Co. in Roxbury, Mass. Cost about $100,000. Archs., Wm. G. Preston, 186 Devonshire St., Boston, Mass.

SCHENECTADY, N. Y.—The Schenectady Railway Co., E. F. Peck, Gen. Mgr., of Schenectady, N. Y., is having plans prepared for a machine and repair shop on McClellan St. Brick, 100 × 200 ft.

YONKERS, N. Y.—The Otis Elevator Co., 17 Battery Pl., New York, has purchased 12 acres of land in Yonkers, N. Y., to be used for an additional factory site.

NEWARK, N. J.—The Sherwin-Williams Paint Co., Brown St. and Passaic River, Newark, N. J., have taken preliminary figures on a $50,000 addition to their factory. The work will consist of a 5-story brick office and warehouse building, 60 × 125 ft.

FLORENCE, N. J.—The Florence Foundry Co., will have plans prepared for a foundry at Florence. Brick, 1 story. Newly equipped.

NEWARK, N. J.—Pigott & Mathesius, Archs., 15 Clinton St., Newark, N. J., are taking figures on the factory building at 391 Mulberry St., Newark, N. J., for the Mehlback Saddle Co., 393 Mulberry St., Newark, N. J. Building to be 4 stories, brick, 25 × 100 ft.

PHILADELPHIA, PA.—Heacock & Hokanson, 931 Chestnut St., Philadelphia, has plans ready for figures for a 5-story brick warehouse.

Watson & Huckel, Archs., 1211 Walnut St., Philadelphia, Pa., are preparing plans for a factory at Orianna and Walnut Sts. Brick, 3 stories. Power and special equipment required.

The Philadelphia & Reading Railway Co. will have plans prepared for repair shops and freight yards at Pulaski Ave., Germantown, Pa.

LITITZ, PA.—J. M. Mast & Co., of Lititz, Pa., have plans ready for bids for an addition to their factory. Concrete, 2 stories, 50 × 200 ft.; slag roof; equipment and special machinery.

STOWE, PA.—Stanley G. Flagg & Co., of Stowe, Pa., have invited bids on a brick and steel, 1-story shop, 50 × 150 ft.

DOYLESTOWN, PA.—The Delaware & Atlantic Telephone & Telegraph Co., will have plans prepared for a telephone building at Doylestown, Pa. Brick and stone, 2 stories.

DOYLESTOWN, PA.—Frank Worthington will have plans prepared for an addition to a hosiery mill at Doylestown, Pa. Brick, 3 stories. New equipment.

SHENANDOAH, PA.—Emil Hartmann, Arch., 514 Walnut St., Philadelphia, Pa., has invited bids for an addition to the Columbia Brewing Co.'s Brewery. Brick and steel, fireproof, 5 stories.

SELLERSVILLE, PA.—S. S. Conver, Arch. Lansdale, Pa., is preparing plans for a clothing factory for S. R. Messick. Brick, 2 stories, power and special equipment required.

FOGELSVILLE, PA.—The Lehigh Portland Cement Co., Allentown, Pa., has invited bids on construction of a new cement mill. Complete power equipment and cement machinery required.

WILMINGTON, DEL. — The Bavarian Brewing Co. has invited bids for an addition to a stock house at Wilmington, Del. Brick and steel, fireproof, 2 stories.

BALTIMORE, MD.—Frank C. Wachter, M. C., of Baltimore, Md., will enlarge his sponging plant 207-9 West German St., Baltimore, by erecting a new building on adjoining lot 60 × 80.

BALTIMORE, MD.—JOHN E. MARSHALL & SON, Baltimore, Md., received the contract for erecting a 5-story factory building for H. B. Gilpin in rear of 304 West Lombard St., Baltimore, Md. Reinforced concrete work is let to the Baltimore Ferro-Concrete Co.

STURGIS, MD.—It is reported that the Citizen's Improvement Co. has arranged to have the Foyer Mfg. Co., of Chicago, move its plant to Sturgis. Baby cabs and carriages are among the articles manufactured.

SPRINGFIELD, MD.—The Maryland Hospital for Insane will have plans prepared for a power house. Brick, stone and steel, 4 stories.

WASHINGTON, D. C.—H. B. Mullett & Co., Archs., 1411 F St., N. W., Washington, D. C., are preparing plans for a warehouse at 459 C St. Brick, 3 stories, 50 × 120 ft.

LANGDON, D. C.—Corby Bros., 2307 Brightwood Ave., N. W., Washington, D. C., have invited bids for the erection of a 4-story frame vinegar factory. New equipment required.

NORFOLK, VA.—Cameron Car Co. is to be organized and will, it is said, remove its automobile manufacturing interests from Pawtucket, R. I., to this city. Site has been secured on the N. W. R. R., and Calvert St. for the erection of a plant, plans for which are stated to have been completed. John L. Roper, S. L. Foster and others are interested.

BENWOOD, W. VA.—It is reported that a new $75,000 brewery will be established here. Robert Smith is interested.

HUNTINGTON, W. VA.—It is reported that the American Car & Foundry Co. will erect a large plant at Huntington at a cost of about $1,000,000.

CHARLOTTE, N. C.—Charlotte Damask Manufacturing Co., capitalized at $150,000, has applied for charter, and proposes to construct a plant in this city for the manufacture of table cloth. J. E. Carson is interested.

BURLINGTON, N. C.—It is reported that the Petty Machine Co. will erect a new factory for the manufacture of wheelbarrows.

McDONOUGH, GA.—It is reported that a large cotton factory is to be erected at McDonough. E. S. Etheridge is Chn. of Com.

COLUMBIANA, ALA.—There is to be a knitting mill established at Columbiana, Ala., by Mr. Mathison, of Talladega. It is to be a $10,000 plant.

TORONTO, O.—It is reported that the Jefferson Glass Co., of Steubenville, O., will erect a new plant here.

JACKSON, MICH.—The Novelty Mfg. Co. has been reorganized and will erect a new factory for the manufacture of metallic refrigerators. H. L. Blair, Pres., Jas. F. Eaton, Secy.

OTSEGO, MICH.—It is reported that the Mac-Simtor Paper Co. will expend $300,000 in new buildings and equipment at Otsego.

DETROIT, MICH.—It is reported that a large brass and copper rolling mill will locate in Detroit. Geo. H. Barbour of the Michigan Stove Co., is interested. Approximated expenditure will reach $1,000,000.

PULLMAN, ILL.—It is reported that the Pullman Co., contemplate extensive improvements to their present plant which will involve the expenditure of $5,000,000.

KALISPELL, MONT.—It is reported that a large sugar plant is to be located at Kalispell, Mont. The factory will be of the largest class and will cost complete in excess of $1,000,000.

GRANITE CITY, MO.—It is reported that the United Lead Co., 71 Broadway, New York, has secured a site at Granite City, Mo., where they will erect a new plant similar to the one at Perth Amboy, N. J.

PLATTEVILLE, COLO.—Hastings Industrial Co., of Chicago, Ill., is to build a $6,500 canning factory here, it is reported. Co-operative company is to be formed with local parties holding most of the stock. Hathaway & Buster, of Platteville, are interested.

BREMERTON, WASH.—Bids are asked by Bureau of Yards and Docks, Navy Department, Washington, until 11 a. m., Jan. 20, 1906, for the constructing of a brick and steel building at the Navy Yard, Puget Sound, Bremerton, Washington.

GEORGETOWN, WASH. — The Seattle Electric Co. has purchased a site at Georgetown, Wash., and will spend $200,000 on improvements consisting of car barns, repair shops and a plant for the manufacture of part of rolling stock for the company.

INDEX, WASH.—A large paper mill is to be built at Index costing $1,000,000, according to reports.

NORTH PORTLAND, ORE.—The Willamette Iron & Steel Works and the Willamette Boiler Works, affiliated companies, have purchased a large water front in North Portland, where they will install a large boiler and steel works. Main building of boiler works is to be 100 × 250 ft. and, it is reported, that it will be equipped with the most modern machinery for handling heavy plate steel. A central power station will be installed in a fireproof building. A wharf system will be constructed on which modern wharf machinery will be installed.

ELGIN, ORE.—It is reported that the Palmer Lumber Co. will build a mill at Elgin at a cost of $500,000. Capacity, 100,000 ft.

ST. JOHNS, ORE.—John Kane and William Francis have purchased 1,400 ft. of water front at St. Johns and will build a $.00,000 saw mill.

CHICO, CAL.—The American Beet Sugar Company, it is stated, will locate a large plant at Chico, Cal.

MISCELLANEOUS CONTRACTS.

The names of parties awarded contracts are printed in capital letters.

FIRE DEPARTMENT.—Live Oak, Fla.—City has voted to issue $5,000 of bonds for a fire department. S. P. Mays is Cy. Clk.

UNDERPASS.—Burlington, Vt.—Rutland R. R. proposes to construct an underpass for the Lakeside crossing, to cost about $30,000. F. O. Sinclair is Cy. Engr.

EXCAVATION.—Buffalo, N. Y.—Bids are asked until 11 a. m., Jan. 15, for excavation in Black Rock Harbor, Buffalo, N. Y. Col. H. M. Adams, U. S. Engrs. (Advertised, Engineering News.)

WHARF.—Fort Monroe, Va.—Bids are asked by Capt. E. Eveleth Winslow, U. S. Engrs., Norfolk, Va., until noon, Dec. 29, for constructing wharf at Fort Monroe. (Advertised, Engineering News.)

DITCH WORK.—Babcock, Wis.—Bids are asked by J. E. Ingraham, Secy., Remington Drainage District Comrs., until noon, Dec. 15, for the construction of drainage ditches requiring 68,500 cu. yds. excavation.

JETTIES.—Rockaway, N. Y.—Contract for building five jetties at eastern extremity of the outer beach for a New York Syndicate has been let to L. Lovton, Rockaway Beach. Post Office is Far Rockaway, N. Y.

EARTH EXCAVATION. — Chattanooga, Tenn.—U. S. Engineers' Office has awarded contract for 1,500,000 cu. yds. earth excavation for the Colbert Shoals Canal to SHIPPEY & OUTZEN, Memphis, Tenn., for about $250,000.

PIER.—Baltimore, Md.—Baltimore & Ohio R. R. has awarded contract to McLEAN CONTRACTING CO., Baltimore, for construction of a 975 ft. long by 160 ft. wide pier at Locust Point. Cost of work will be about $500,000.

PLOWS, EVENERS, ETC.—Washington, D. C.—Bids are asked by D. W. Ross, General Purchasing Officer, Isthmian Canal Commission, until 10.30 a. m., Dec. 18, for furnishing plows, eveners, chains, wood trimmers, steam pump, etc.

DOCKS. — Brunswick, Ga. — Atlantic & Birmingham Ry., W. A. Kennon, Res. Engr., Brunswick, proposes to construct docks at this point. Company has 2,600 ft. of frontage on Oglethorpe Bay which it expects to utilize for this purpose.

BRICK TUNNEL.—Milwaukee, Wis.—Bids are asked by Board Public Works, Charles J. Poetsch, Pres., until Dec. 20, for the construction of a brick tunnel 345 ft. long (and two shafts) under and across the Milwaukee River. (Advertised, Engineering News.)

EXCAVATION, ETC.—Brooklyn, N. Y.—Bids are being asked by the Brooklyn [illegible] Grade Crossing Comrs., 44 Court St., Brooklyn, until 10 a. m., for the "Bay Ridge improvement." The work includes 1,0[illegible] yds. excavation. See Long Island R. [illegible] under Railways.

RIP RAP.—New York, N. Y.—[illegible] are asked by Maurice Featherson, Comr. Docks, Pier A, Battery Pl., until 2 p. m. [illegible] 15, for furnishing all the labor and materials required for furnishing, delivering [illegible] putting in place about 20,000 cu. yds. of rip rap stone, Class II.

FLUSHING TUNNEL.—Brooklyn, N. Y.—Contract for constructing flushing [illegible] for improvement of Gowanns Canal has [illegible] let to JNO. PEIRCE CO., 277 Broadway, New York, for about $715,000. Bids were [illegible] opened Nov. 15 and were given under Contract Prices in our issue of Nov. 23.

ORE DOCK.—Duluth, Minn.—Duluth, Missabe & Northern Ry., H. L. Dres[illegible], Ch. Engr., Duluth, is stated to have awarded contract for construction of the new [illegible] 4 ore dock to BARNETT & RECORD Co., 302 Corn Exchange, Minneapolis, Minn. Contract amounts to about $700,000, but $30[illegible] additional is to be spent by road itself.

DREDGING, FILLING.—Philadelphia, Pa.—Bids are asked by Bureau Yards and Docks, Navy Department, Washington, D. C., until 11 a. m., Dec. 13, for dredging and filling at League Island Navy Yard. An appropriation of $77,000 is available for the work. Specifications may be seen at office of Engineering News, 220 Broadway, New York.

DREDGING.—Philadelphia, Pa.—It is stated that all bids received Nov. 24 by Department Public Service, A. Lincoln Acker, Dir., for improving channels of Delaware River, will be rejected and new bids taken. The bids exceeded the available appropriation of $750,000, the reason for this being said to be owing to the fact that the specifications required the dredged material to be dumped on Pennsylvania soil. The bids received Nov. 24 will be found under Contract Prices.

GRADING. — Beaumont, Tex. — Kenefick-Hammond-Quigley Construction Co., Beaumont, has 300 miles of grading between Baton Rouge, La., and Houston, Tex., one year's work, to let. They will let it in quantities to suit any sized outfit; free transportation on outfits from any point on the Kansas City Southern R. R. and over the main line of the St. Louis, Iron Mountain & Southern R. R. Profiles and full information can be had at their office in Beaumont.

FERRY HOUSE.—New York, N. Y.—Following bids were opened Dec. 5 by Maurice Featherson, Comr. Docks, for furnishing the labor and materials required for preparing for and building at the foot of Whitehall St., East River, a new ferry house and structures appurtenant thereto, in connection with the new Whitehall Ferry terminal: Northeastern Const. Co., Fuller Bldg., New York, $381,000; Bernard Rolf, 39 Cortlandt St., New York, $385,000; Buckley Realty & Const. Co., 42d St. and Broadway, New York, $375,000.

QUAY WALL.—Cuba.—Following was only bid received Dec. 2 by Bureau of Yards and Docks, Navy Department, Washington, D. C., for construction of timber and concrete quay wall for the U. S. Naval Station at Guantanamo, Cuba: The Globe Construction Co., 511 Old South Bldg., Boston, Mass., price for work complete, $171,329; price per lin. ft. for each foot of wall constructed additional to item 1, and extending westward, $365; price per lin. ft. of wall omitted from item 1, beginning at west end and extending eastward, $301.

QUAY WALL.—Key West, Fla.—Following bids were opened Dec. 2, by Bureau Yards and Docks, Washington, for constructing a quay wall at Naval Station, Key West: Globe Construction Co., 511 Old South Bldg., Boston, Mass., $225,000 for quay wall and track pier, complete according to specifications, $217 to be deducted for each linear foot of main wall omitted at south end of wall, $40 to be deducted for each foot of track pier omitted at south end; Snare & Triest Co., 143 Liberty St., New York, (a) $166,000, work complete according to bidder's specifications, (b) $200 to be deducted per linear foot of main wall omitted at south end of wall, (c) $175,000, same as (a) but with granite facing, (d) $210 per linear foot to be deducted from (c); (e) $170,000, same as (a) with concrete block facing; (f) $200 per linear foot to be deducted from (e); (g) $15 to be deducted for linear foot of track pier from (a), (c) or (e).

CONTRACT PRICES.

[Where (*) precedes items under Contract Prices the work was advertised in Engineering News.]

***WATER PIPE.—Providence, R. I.—Bids were opened Nov. 16 by Department Public Works, Herbert E. Wood, Secy., for furnishing cast iron water pipe in the following quantities: 4-in. B., 9 gross tons; 6-in. B., 273 gross tons; 8-in. A., 72 gross tons; 8-in. B., 334 gross tons; 12-in. B., 230 gross tons; 16-in. B., 192 gross tons; 24-in. B., 260 gross tons; 30-in. B., 16 gross tons; 42-in. A., 977 gross tons; 42-in. b., 4,262 gross tons; 42-in. B., 178 gross tons. The bids received were as follows: Camden Iron Works, $33.90 for each of first four items, $31.90 for next three items, $31.40 for ½ of last four items, or $32.90 for all of last four items, total $223,825; WARREN FOUNDRY & MACHINERY CO., $26.40 per net ton for each item (awarded contract at that bid), or $29.568 per gross ton, total $201,151; U. S. Cast Iron Pipe & Foundry Co., $31.90 for each item, total $217,016.**

DREDGING.—New York, N. Y.—Following bids were opened Nov. 28 at U. S. Engineer's Office, for dredging in Shrewsbury River, N. J.: J. Marvin Briggs, 17 Battery Pl., New York, 38 cts.; Michael Flannery, 120 Liberty St., New York, 28 cts.

***SEWAGE PURIFICATION WORKS.**—Columbus, O.—Bids were opened Nov. 2 by Board Public Service, Julian Griggs, Ch. Engr., for construction of sewage purification works, contract No. 13, the contract being awarded to SULLIVAN, MURPHY & MILES, Columbus, on $435,841. The bids and engineer's estimate were as follows: (1) Engineer's estimate, (2) Sullivan, Murphy & Miles, Columbus, (3) Westwater & Casey, Columbus, (4) J. H. Louchheim, Philadelphia, Pa., (5) Ferro-Concrete Construction Co., Cincinnati, O., (6) Keeling & Ridge Co., Cincinnati, O.:

BIDS RECEIVED AT COLUMBUS, OHIO, NOVEMBER 2, 1905, BY BOARD PUBLIC SERVICE, FOR CONSTRUCTION OF SEWAGE PURIFICATION WORKS.

Items.	Quanities.	(1)	(2)	(3)	(4)	(5)	(6)
Excavation above elev. 6.0	125,000 cu. yds.	$0.35	$0.40	$0.69	$0.33	$0.29	$0.40
Excavation below elev. 6.0	1,450 "	1.50	2.00	1.50	2.50	2.00	.60
Rolled embankment	3,000 "	.20	.40	.15	.20	.60	.20
Loam	9,500 "	.40	.40	.30	.30	.24	.40
Seeding	40 acres	40.00	25.00	10.00	40.00	24.00	100.00
Sodding	2,500 sq. yds.	.30	.15	.30	.30	.48	.50
Broken stone or gravel backing	60 cu. yds.	.65	1.50	.75	1.00	1.20	2.00
Stone paving	30 "	2.50	4.00	3.00	3.00	7.20	7.00
Gravel in roadways and walks	1 300 "	.75	1.25	1.00	1.00	1.00	1.50
Paved gutter	1,500 lin. ft.	.60	.40	.50	.60	.48	1.00
Granolithic pavement	50 sq. yds.	1.75	1.50	1.50	2.25	1.44	2.25
Brick masonry	21 cu. yds.	12.00	9.00	9.00	11.50	18.00	20.00
Concrete, Class A	15 "	30.00	15.00	6.45	20.00	12.50	15.00
" " B	540 "	12.00	15 00	6.45	9.30	14 62	10.00
" " C	3 570 "	8.00	8.00	6.45	7.50	10.60	8.25
" " D	2,290 "	7.50	5.50	6.45	7.80	8.65	7.00
" " E	14,330 "	6.50	4.50	6.45	6.60	7.00	6.00
" " F	3,500 "	6.00	4.00	6.45	5.20	5.00	7.00
Twisted steel rods	85 tons	70.00	60.00	54.00	65.00	62.40	75.00
3-in. vitrified sewer pipe	40 lin. ft.	.15	.05	.10	.07	.12	.35
5-in. " " "	18,300 "	.15	.11	.10	.24	.15	.15
6-in. " " "	10,400 "	.18	.13	.12	.24	.155	.20
16-in. " " "	580 "	.60	.44	.60	.66	.58	1.25
21-in. " " "	630 "	1.10	.73	.70	1.20	.96	2.25
24-in. " " "	80 "	1.50	.92	1.00	1.32	1.20	2.50
6-in. lateral collectors	530,000 "	.08	.065	.075	.07	.12	.20
Cast-iron pipe	196 tons	40.00	32.00	33.00	40.00	115.00	60.00
Bell & Spigot special castings	32 "	75.00	80.00	75.00	80.00	65.00	100.00
Flange special castings	3 "	90.00	100.00	90.00	100.00	72.00	150.00
Short cast-iron risers	64	.75	1.05	1.00	1.08	.60	1.25
Long cast-iron risers	2.044	1.50	1.85	1.60	2.00	1.20	2.00
Sprinkler nozzles	2,150	.70	1.40	.55	.75	2.25	5.00
2-in. wrought iron pipe	760 lin ft.	.20	.18	.20	.20	.36	.75
4-in gate valves	26	10.00	11.00	10.00	12.48	8.00	10.00
8-in. " "	1	25.00	20.00	20.00	25.00	12.00	15.00
10-in. " "	4	35.00	30.00	33.00	36.00	20.00	35.00
12-in. " "	3	45.00	40.00	45.00	48.00	24.00	60.00
Indicator stand	1	30.00	30.00	30.00	25.00	75.00	60.00
Valve boxes	33	5.50	4.00	3.50	4.00	3.00	5.00
5-in. fire hydrants	15	45.00	40.00	36.00	35.00	15.00	35.00
6-in. circular sluice gates	15	60.00	55.00	14.00	42.00	66.00	15.00
8-in. " " "	2	65.00	70.00	18.00	49.00	74.00	20.00
12-in. " " "	1	95.00	85.00	75.00	87.00	90.00	70.00
15-in. " " "	1	110.00	110.00	100.00	102.00	127.00	110.00
20-in. " " "	2	125.00	160.00	125.00	135.00	164.00	175.00
Circular sluice gates	80	175.00	166.00	133.00	168.00	210.00	200.00
" " "	1	260.00	270.00	225.00	230.00	348.00	400.00
" " "	1	660.00	450.00	475.00	500.00	824.00	500.00
" " "	5	1,100.00	700.00	1,200.00	1,050.00	1,150.00	1,000.00
Rect. " "	18	375.00	330.00	200.00	280.00	380.00	300.00
" " "	2	425.00	380.00	250.00	350.00	435.00	550.00
42-in.x42-in. retangular sluice gates	2	525.00	475.00	400.00	550.00	500.00	800.00
Flap valves	2	40.00	30.00	30.00	25.00	20.00	25.00
" "	2	50.00	40.00	30.00	27.50	24.00	35.00
" "	2	60.00	55.00	35.00	42.00	36.00	50.00
Alt. bid, 48-in. flap valves	1	650.00	1,200.00	200.00	390.00	375.00	600.00
" " " " "	1	650.00	1,200.00	200.00	390.00	375.00	600.00
" 66-in. " "	1	1,200.00	1,200.00	300.00	720.00	700.00	700.00
" " " "	1	1,200.00	1,500.00	300.00	720.00	700.00	700.00
Venturi meter	....	4,500.00	4,356.00	3,600.00	4,656.00	3,000.00	3,000.00
Controllers	2	1,650.00	1,680.00	1,700 00	1,750.00	1,760.00	1,000.00
Depth recorded in gate house	1	120.00	102.00	125.00	150.00	2.50	150.00
Water level indicator in gate house	1	125.00	90.00	125.00	150.00	2.50	150.00
Water level indicator for river	1	170.00	96.00	125.00	150.00	2.50	250.00
Centrifugal pump and gas engine	....	3,400.00	3,574.00	2,000.00	3 900.00	3,490.00	1,000.00
Spiral stair case	....	150.00	176.00	150.00	180.00	110.00	250.00
Scum boards in septic tanks	....	650.00	993.00	1,000.00	2,000.00	1,080.00	4,000.00
Broken stone filtering material	82,000 cu. yds.	1.50	1.57	1.50	1.68	1.58	1.25
Wrought-iron pipe railing	2,950 lin. ft.	1.00	.60	.75	1.50	1.80	.75
Iron castings	58,500 lbs.	.035	.04	.03	.94	.04	.07
Structural steel	45,000 "	.04	.04	.04	.04¾	.04	.07
Brick masonry in gate house	....	1,900.00	1,102.00	1,120.00	1,700.00	1,390.00	2,500.00
" " in pump house	....	500.00	518.00	495.00	800.00	580.00	2,500.00
Hollow t. c. roof tile in gate house	....	250.00	385.00	115.00	820.00	350.00	700.00
" " " " in pump house	....	150.00	195.00	115.00	310.00	200.00	700.00
" " partition tile in gate house	....	200.00	204.00	50.00	400.00	200.00	250.00
Roof and sheet metal work in gate house	....	750.00	641.00	460.00	1,100.00	450.00	1,000.00
Roof and " " pump house	....	450.00	300.00	250.00	500.00	250.00	1,000.00
Carpenter and millwork in gate house	....	1,300.00	1,362.00	1,030.00	2,200.00	800.00	1,000.00
Carpenter and " " pump house	....	300.00	390.00	225.00	800.00	300.00	1,000.00
Plastering and metal lath, in gate house	....	200.00	216.00	400.00	600.00	330.00	500.00
Plastering in pump house	....	47.00	36.00	200.00	100.00	250.00	500.00
Painting and glazing in gate house	....	400.00	283.00	150.00	450.00	400.00	500.00
Painting and glazing in pump house	....	100.00	78.00	100.00	190.00	300.00	500.00
Plumbing	....	800.00	1,243.00	650.00	1,006.00	800.00	1,000.00
Gas fitting in gate house	....	300.00	401.00	150.00	320.00	250.00	250.00
Gas fitting in pump house	....	20.00	30.00	85.00	40.00	150.00	150.00
Totals		$474,960	$435,841	$484,158	$486,762	$532,271	$548,642

***HYDRAULIC APPARATUS.**—Los Angeles, Cal.—Bids were opened Nov. 2 by U. S. Reclamation Service, W. H. Sanders and O. H. Ensign, Consult. Engrs., and L. C. Hill, Supervising Engr., for hydraulic apparatus for the Roosevelt power plant, Salt River Project, Arizona. The Lombard Governor Co. offered the following bid: Generator wheel governor (Item 2), $1,200; relief valves, $625 each; generator wheel governor (Item 10), $1,200; time of delivery, 3 months. The Replogle Governor Co., bid $400 on exciter wheel governor (Item 4) with delivery in 90 days. The other bids received were as follows; (1) S. Morgan Smith, York, Pa.; (2) Allis-Chalmers Co., Milwaukee, Wis.; (3) Camden Iron Works, Camden, N. J.; (4) Risdon Iron Works, San Francisco, Cal. (bid f. o. b. San Francisco, except for governor); (5) I. P. Morris Co., Philadelphia, Pa.; (6) Platt Iron Works, Dayton, O.; (7) Pelton Water Wheel Co., San Francisco, Cal. (f. o. b. San Francisco):

BIDS RECEIVED AT LOS ANGELES, CAL., NOVEMBER 2, 1905, BY U. S. RECLAMATION SERVICE, FOR HYDRAULIC APPARATUS FOR THE ROOSEVELT POWER PLANT, SALT RIVER PROJECT, ARIZONA.

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
Generator wheel	Item 1	$2780	$3019	$4500	$5200	$6350	$6784	$7200
Generator wheel governor	" 2	1225	1183	......	1250	2000	1025	825
" " "	" 2A	......	See bid	......	1400	3000	1200	1150
Exciter wheel	" 3	875	1293	1840	2500	1800	900	1360
" " governor	" 4	275	650	......	300	285	250	350
4-ft. gate valve, hydraulic op.	" 5	1400	1500	1450	3300	635	2000	2000
" " mechanically op.	" 5A	1150	1350	1650	3500	725	1600	2000
18-in. gate valves	" 6	110	325	300	2500	75	175	175
18-in. pipe fittings	" 7	210	450	380	250	185	156	125
Relief valves	" 8	630	403	......	1400§	1090	625	360
2 generator wheels	" 9	2780	3019†	7250	10400§	5209	6184	6975
" " governor	" 10	1225	1183	......	2500§	1785	1025	825
" " "	" 10A	......	2835	......	2800§	2075	1200	1150
4-ft. gate valve, hydraulic op.	" 11	1400	1500	1450	6500§	635	1900	1900
" " mechanically op.	" 11A	1150	1350	1650	6900§	725	1600	1900
Time of delivery		4 mo.	7 mo.	4 mo.	4 mo.	5 mo.	120 days	4 mo.
Weight, generator wheel and case		36,985 lbs.	29,200 lbs.	......	50,000 lbs.	40,000 lbs.	......	47,500 lbs.
" exciter " " "		7,742 "	10,600 "	......	15 000 "	6,000 "	......	11,000 "
Price, items 1, 3, 9; f.o.b.		$9215	$10350	$13590	$18100	$18550	$20052	$21310
Weight, " "		118,517 lbs.	98,200 lbs.	......	165,000 lbs.	126,000 lbs.	......	153,500 lbs.
Freight, " " to Roosevelt, Arizona		$2940	$2450	......	$2780	$3160	......	$2560
Cost " " delivered		12155	12800	......	20880	21700	......	23870
Price, necessary auxiliaries; f.o.b.*		9950	10931	......	23000	10350	11036	9995
Efficiency generator wheel, full gate		81%‡	79%	80%	76%	......	78.5%	......
" " " ¾ gate		81%‡	81%	76%	78%	82%	80%	......
" " " ½ gate		80%‡	77%	......	73%	70%	75%	......
" exciter wheel, full gate		81%‡	......	80%	75%	......	......	......
" " " ½ gate		81%‡	......	76%	77%	80%	......	......
" " " ¾ gate		80%‡	......	......	72%	......	......	......

* Includes 1 of item 2, 1 of 4, 1 of 5, 3 of 6, 1 of 7, 2 of 8, 2 of 10, 2 of 11.
‡ These efficiencies are the average between the points named.
† For two.
§ Total.

***IRRIGATION CANALS.**—Glendive, Mont.—Bids were opened Nov. 15 by U. S. Reclamation Service, H. N. Savage, Supervising Engr., A. J. Wiley, Consult. Engr., and F. E. Weymouth, Project Engr., for constructing main canal and lateral systems, Lower Yellowstone Project, Monatana and North Dakota. Widell, Finley Co., Mankato, Minn., was lowest bidder on three of the five divisions of the main canal and on eight of the eleven laterals, the bid of the firm on Divisions 7, 8 and 9, and the laterals being conditional on the award of Divisions 5 and 6. On Division 6 Nels L. Olsen, Butte, Mont., at $13,273 was lowest bidder; Lamb & Frye, Glendive, Mont., at $5,439, was lowest bidder for Division 8, and same firm at $12,689 and $6,237 was lowest bidder for Laterals F, O and P; Noble & Mann, Buford, S. Dak., at $5,727, was lowest bidder on Lateral N. The itemized bid of Widell, Finley Co., the only bidder for all the work, was as follows:

Items.	Quantities.	Amount
	Division 5	
Excavation:		
Class 1	602,000 cu. yds.	$1.69
Class 2	120,000 "	.30
Class 3	100 "	.50
Class 4	10 "	1.50
Overhaul	140,000 "	.015
Puddling	3,000 "	.50
Total		$141,403
	Division 6	
Excavation:		
Class 1	272,000 cu. yds.	$0.168
Class 2	100 "	.30
Class 3	100 "	.50
Class 4	10 "	1.50
Overhaul	75,000 "	.015
Puddling	2,000 "	.50
Total		$47,916
	Division 7	
Excavation:		
Class 1	44,600 cu. yds.	$0.165
Class 2	200 "	.30
Class 3	200 "	.50
Class 4	10 "	1.50
Overhaul	1,000 "	.015
Puddling	200 "	.50
Total		$7,649
	Division 8	
Excavation:		
Class 1	38,000 cu. yds.	$0.162
Class 2	1,000 "	.30
Class 3	1,000 "	.50
Class 4	20 "	1.50
Overhaul	1,500 "	.015
Puddling	200 "	.50
Total		$7,108
	Division 9	
Excavation:		
Class 1	30,000 cu. yds.	$0.16
Class 2	2,500 "	.30
Class 3	2,500 "	.50
Class 4	50 "	1 50
Overhaul	2 000 "	.015
Puddling	200 "	.50
Total		$7,005
	Laterals A and B	
Total		$3.880
	Lateral C	
Total		$4,658
	Laterals D and E	
Total		$7,713
	Lateral F	
Excavation:		
Class 1	93,600 cu. yds.	$0.16
Class 2	200 "	.30
Class 3	200 "	.50
Class 4	10 "	1.50
Overhaul	4,000 "	.015
Puddling	300 "	.50
Total		$15,361
	Laterals Fa and Ga	
Excavation:		
Class 1	48,300 cu. yds.	$0.16
Class 2	100 "	.30
Class 3	100 "	.50
Class 4	10 "	1.50
Overhaul	1,000 "	.015
Puddling	200 "	.50
Total		$7,938
	Laterals I, J, Ja and Jb	
Total		$5,378
	Lateral K	
Excavation:		
Class 1	57,100 cu. yds.	$0.16
Class 2	200 "	.30
Class 3	200 "	.50
Class 4	10 "	1.50
Overhaul	1,500 "	.015
Puddling	200 "	.50
Total		$9,433
	Lateral L	
Total		$4,978
	Lateral M	
Total		$4 818
	Lateral N	
Excavation:		
Class 1	36 800 cu. yds.	$0.16
Class 2	100 "	.30
Class 3	100 "	.50
Class 4	10 "	1.50
Overhaul	1,500 "	.015
Puddling	200 "	.50
Total		$6,105
	Laterals O and P	
Excavation:		
Class 1	45 100 cu. yds.	$0.16
Class 2	200 "	.30
Class 3	200 "	.50
Class 4	10 "	1.50
Overhaul	1,500 "	.015
Puddling	200 "	.30
Total		$7,513

ASPHALT PAVING.—Bayonne, N. J.—Bids were opened Nov. 21 by City Council, F. W. Dalrymple, Cy. Engr., for paving Ave. C. for a length of 2,690 ft. and a width of 42 ft., with sheet asphalt having a wearing coat 2½ ins thick; work is to be guaranteed for ten years; foundation is to be of Portland cement concrete, 4 ins. thick, and curb is to be of stone and concrete, 5 ins. × 20 ins. The bids received were as follows; (1) Barber Asphalt Paving Co., 114 Liberty St., New York (bid on Solidad asphalt); (2) Uvalde Asphalt Paving Co., 26 Court St., Brooklyn, N. Y. (bid on Venezuela Lake asphalt); (3) Warner-Quinlan Asphalt Co., 42 Broadway, New York (bid on Trinidad, Cuban or Bermudez); (4) Lee & MacDonald (bid on Bermudez Lake asphalt):

Bids received at Bayonne, N. J., November 21, 1905, by City Council, for Paving Avenue C.

Items.	Quantities.	(1)	(2)	(3)	(4)
Earth Excavation	10,100 cu. yds.	$0.38	$0.32	$0.30	$0.45
Paving	27,700 sq. "	1.49½*	1.52	1.69	1.58
New stone curb	250 lin. ft.	.65	.67	.60	.69
Curb, reset	6,640 "	.10	.10	.05	.14
Flag, relaid	1,100 sq. ft.	.02¾	.02	.03	.04
Basin heads, reset	4	5.00	5.00	2.00	5.00
New concrete curb	250 lin ft.	.59	.60	.60	.75
Concrete curb and gutter	2,790 "	.90	.95	.75	1.05
Bridge stone taken up and stored	6,680 sq. ft.	.05	.05	.03	.07
Bridge stone taken up and relaid	4,760 "	.07	.07	.05	.06
New circular curb corners	11 per set	10.00	10.00	7.00	11.00
Totals		$49,562	$49,783	$53,124	$53,460

* Bids $1.59½ on Trinidad Pitch.

TRUNK SEWER.—Elyria, O.—Bids were opened Nov. 13 by Board Public Service, Scott Hinman, Clk., for constructing East Side trunk sewer, consisting of both pipe and brick sewers. The proportion of trenching in rock is about 7-15 and the price bid per lin. ft. does not include excavation. The bids received were as follows: (1) Ferguson & Purcell, Lorain, O.; (2) Paul & Cushner, Dayton, O.; (3) L. J. Bachus, Dayton, O.; (4) PRICE & HURLEY, Marion, O. (awarded contract); (5) Hennessey & Co., Napoleon, O.

Bids Received at Elyria, O., November 13, 1905, by Board Public Service, for Constructing East Side Trunk Sewer.

Items.	Quantities.	(1)	(2)	(3)	(4)	(5)
Earth excavation	8,113 cu. yds.	$0.50	$0.50	$0.50	$0.50	$0.40
Rock excavation	6,936 "	3.50	2.50	2.85	2.25	2.90
Concrete	....	7.00	....	12.00	....	....
Brick work, lin. ft	....	7.00	....	....	....	6.00
Manholes	23	55.00	50 00	54.00	50.00	35.00
Lumber	....	30.00	30.00	....	....	40.00
Sewers, 36-in. brick	2,012 lin. ft.	3.25	3.00	2.70	3.00	3.50
" 24-in. pipe	3,690 "	1.25	1.50	1.40	1.50	1.05
" 20-in. pipe	900 "	.90	1.30	1.00	1.30	.75
" 18-in. pipe	1,880 "	.70	1.00	.77	1.00	.59
" 8-in. pipe	900 "	.20	.50	.20	.50	.16½
Totals		$44,774	$38,964	$39,443	$37,218	$38,043

*DREDGING.—Philadelphia, Pa.—Bids were opened Nov. 24 by Department Public Works, A. Lincoln Acker, Dir., for improving channel of Delaware River. Work consists of excavation of mud, sand, etc. (unclassified) and bids were taken on five sections. It is stated that the bids exceed the $750,000 appropriation available and that new proposals will be taken. The bids received were as follows: (1) Section 6-A, 1,120,000 cu. yds.; (2) Section 6-B, 1,121,000; (3) Section 7, 1,048,000 cu. yds.; Section 8, 1,450,000 cu. yds.; Section 9, 846,000 cu. yds.:

BIDS RECEIVED AT PHILADELPHIA, PA., NOVEMBER 24, 1905, BY DEPARTMENT PUBLIC WORKS, FOR IMPROVING CHANNEL OF DELAWARE RIVER.

Name and Address.	(1)	(2)	(3)	(4)	(5)	
American Dredging Co., 510 Mariner and Merchants Bldg., Phila.	$0.15½	$0.16½	$0.18	$0.18-7/10	$0.18⅛	17 months
Alantic, Gulf and Pacific Dredging Co., Park Row Bldg., New York.	.16	.17	.18	.19	.19	Dec. 31, 1907
P. Sanford Ross, Inc., Jersey City, N. J	.17	.18	.20	.20	.20	24 months
N. American Dredging Co., by Claude Cummins, Jacksonville, Fla.	.14-89/100	...	.14-89/100	....	....	14 months
Morris & Cummings Dredging Co., 17 State Street, New York	.20	.20	.20	.24.	.24	24 months
Remarks	Scow measurement	Scow measurement	Scow measurement	Place measurement	Scow measurement	

*WATER-WORKS.—Lebanon, Pa.—Following bids were received Nov. 16 by Commissioners, J. N. Shaffer, Secy., for constructing water-works for township of West Lebanon: (1) BOLTON G. COON, Kingston, Pa. (awarded contract); (2) Weaver Construction Co., Allentown, Pa.; (3) Wm. Weikle, Lebanon, Pa.; (4) Filbert Paving Co., Philadelphia, Pa.; (5) Edward M. Miller, Philadelphia, Pa.; (6) Hawman Construction Co., Reading, Pa.; (7) P. J. Cleary, Shenandoah, Pa.; (8) A. M. Bowman & Co., Pittsburg, Pa.; (9) L. L. Beckwith, Ridgefield, Conn.; (10) Fehr & O'Rourke, Reading, Pa.; (11) Fritz & Partridge, Dover, N. J.

BIDS RECEIVED AT LEBANON, PA., NOVEMBER 16, 1905, BY COMMISSIONERS, FOR CONSTRUCTING WATER-WORKS FOR TOWNSHIP OF WEST LEBANON.

Items.	Quantities.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
4-in. pipe laid, complete	1 670 lin. ft.	$0.44	$0.49	$0.59	$0.54	$1.05	$1.08	$0.57	$0.65	$0.56	$0.54	$0.51
6-in. " " "	4,280 "	.63	.61	.90	.68	1.24	1.20	.85	.91	.81¼	.77	.66½
8-in. " " "	3,280 "	.82	.76	.96	1.00	1.55	1.40	1.06	1.24	1.11	.96	.91
10-in. " " "	870 "	1.10½	.95	1.24	1.33	1.85	1.62	1.38	1.58	1.71	1.36	1.16
Excavation in pipe trenches	150 cu. yds.	.40	.45	.40	.50	2.50	.90	.60	.90	.35	1.00	.45
Excavation other than pipe trenches	200 "	.50	.49	.40	.50	2.50	.50	1.25	.84	.40	.80	.35
Two-way fire hydrants, set; complete	20 each	23.00	40.00	30.00	29.50	30.00	50.00	26.00	27.60	30.00	27.50	25.00
10-in. gate valves	2 "	23.50	34.35	30.00	30.00	36.00	35.00	29.00	28.80	30.00	25.00	23.50
8-in. " "	9 "	17.50	30.00	26.00	25.00	26 00	27.00	22.00	20.04	21.00	18.50	17.50
6-in. " "	12 "	12.00	25.00	20.00	20.00	15.00	20.00	16.00	13.32	15.00	12.50	11.50
4-in. " "	23 "	8.00	20.00	12 00	12.50	10.00	15.00	10.00	8.04	10.50	8.50	7.50
Air Valves	4 "	22.00	15.00	8.00	22.50	25.00	30.00	18.00	9.00	20.00	19.00	16.00
Cast-iron valve boxes	46 "	3.00	5.50	7.00	4.75	6.00	4.00	4.00	3.25	4.00	3.50	3.25
Cast-iron plugs for stopping ends of pipe, any size	12 "	1.00	1.00	1.70	.50	1.00	1.00	.60	1.20	1.00	.42	.60
Concrete	10 cu. yds.	6.00	7.00	4.10	6.56	8.00	6.00	8.00	8.40	4.50	5.50	6.50
Reservoir complete, Carey roofing	....	5,520	5,151	3,150	6,228	9,750	7,400	7,100	6,847	5,500	6,165	7,455
Totals		$15,927	$16,461	$16,709	$18,740	....	$27,504	$20.682	....	$19,151	$18,722	$18,765

INDUSTRIAL NOTES.

WM. D. CASSONE, Mgr. Universal Construction Co., Allentown, Pa., informs us that the partnership heretofore existing between Wm. Cassone and Jos. Cassone, trading as Cassone Bros., second floor Ruhe Building, northwest corner Sixth and Hamilton Sts., Italian laborers, has been dissolved by mutual agreement. Wm. Cassone will conduct the business in the future at the same place and will add many new features to his business.

THE BUCYRUS CO., of South Milwaukee, Wis., is building 61 steam shovels, three railroad wrecking cranes and one railroad pile driver for work at Panama. These comprise all the steam shovels, railroad wrecking cranes and railroad pile drivers purchased by the Isthmian Canal Commission to this date (Nov. 1, 1905).

THE INDEPENDENT PNEUMATIC TOOL CO., First National Bank Bldg., Chicago, reports that it has opened an office at 207 Germania Bank Building, Pittsburg, at which place it will carry a complete line of Thor Piston air drills, reversible flue rolling, reaming, tapping and wood boring machines, and pneumatic riveting, chipping, calking and beading hammers. Mr. Richard D. Hurley has been appointed manager of this office. Mr. James C. Dennis has entered its employ as salesman, and will travel out of its New York office.

G. M. GEST, subway contractor, of New York and Cincinnati, has been awarded the contract for the construction of a complete subway system at Chattanooga, Tenn., for the East Tenn. Bell Telephone Co. Active work on construction of this contract was commenced this week and is to be rushed to a speedy conclusion. This is the first conduit work installed in the City of Chattanooga and the system will be a very large one.

THE WESTINGHOUSE ELECTRIC & MFG. CO., Pittsburg, whose name is associated with the paper mill industry, has recently equipped a number of grinders with A. C. motors. The Brooklyn Heights Ry. Co. has recently placed an order with the Westinghouse Electric & Mfg. Co. for a substantial addition to their present equipment, consisting of 300 No. 101-B Westinghouse D. C. railway motors and 150 sets of controllers. The order for motors is in addition to one placed some months ago for 600 motors of the same type. The Westinghouse Electric & Mfg. Co. continue to have a big demand for the A. C. motors of the "CCL" type. A large marble plant has recently been equipped.

THE WELLMAN-SEAVER-MORGAN CO., of Cleveland, has been awarded by the U. S. Government the contract for crane service over two ship building berths, at the U. S. Navy Yard at Mare Island, San Francisco. This is one of the most important contracts in this line that has been placed for a long time, comprising an immense steel trestle and a powerful high-speed cantilever gantry crane mounted on same and traversing over the two berths.

THE INDEPENDENT PNEUMATIC TOOL CO., Chicago, state that it had a large increase in business during the month of October, having received an unprecedented number of orders for Thor Pneumatic Tools and Appliances from all parts of the world. One cable order received a few days ago from a concern in England included 200 Thor Piston Air Drills, Reversible wood Boring Machines and Pneumatic Riveting and Chipping Hammers of various sizes. There is also a great demand for Pneumatic Tools from railroads and industrial works in this country. On account of the increase in business, it intends to enlarge its plant at Aurora, Ill., and the company is now purchasing a large amount of new machinery for installation therein.

THE ALLIS-CHALMERS CO., Milwaukee, Wis., reports that George H. Norman, Pres. Newport Water-Works, Newport, R. I., has awarded it the contracts for a vertical, triple expansion, crank and fly wheel pumping engine. The engine will have a daily capacity of 6,000,000 U. S. gallons against a head of 190 ft. This engine is built after a new design of small vertical engines recently developed by the Allis-Chalmers Co., with a view to furnishing vertical engines of the highest economy in the smaller sizes. The Metropolitan Water and Sewerage Board, of Boston, has recently awarded the contracts for the Arlington Water-Works Station to the Allis-Chalmers Co. The equipment to be furnished is a horizontal, compound, condensing pumping engine, having a capacity of 1,500,000 U. S. gallons in 24 hours against a head of 290 ft.

THE B. F. STURTEVANT CO., Hyde Park, Mass., reports as follows: Among recent sales of mechanical draft apparatus may be mentioned the Illinois Central R. R. Co., Chicago, Ill.; Cleveland-Cliffs Iron Co., Ispheming, Mich.; Jefferson County Jail, Louisville, Ky.; Eaton, Cole & Burnham, Bridgeport, and the U. S. Custom-House, N. Y. Buffalo Public School No. 7, Buffalo, N. Y., is being equipped with a complete heating and ventilating system, consisting of engine-driven fan, heater, galvanized iron piping, etc., furnished by the Sturtevant Co. Among recent orders taken for heating and ventilating apparatus for school buildings may be included the buildings at Linden, Ind.; Salem, N. J.; Lowell, Mass.; Brooklyn, N. Y.; and Oklahoma City, Oklahoma. The laundry of the Hotel St. Regis, 5th Ave. and 55th St., New York, is being equipped with heating and ventilating apparatus, furnished by the Sturtevant Co. Bantleon Bros. Co., Rochester, are equipping their dry kiln with complete apparatus, consisting of engine-driven fan, heater, etc. The heating and ventilating apparatus for the Aetna Cotton Mills, Union, S. C., is to be furnished by the Sturtevant Co.

THE AMERICAN WOOLEN CO., of Boston, through its president, Wm. M. Wood, has just signed a contract with the Otis Elevator Co., of New York, for four escalators to be installed in the new "Wood" worsted mill which is being built at Lawrence. This is the first factory installation of the escalator on record, and in fact one of the first instances where provision has been made in a factory equipment for mechanical means of elevating employees from the surface level to the various floors. The "Wood" worsted mill will be one of the largest single factory buildings in the world, contemplating an ultimate capacity of 5,000 hands. The escalators are to be installed in a special building situated between the wings of the factory proper and adjoining and connected with the factory entrance, which is on the second floor. The two escalators will run in parallel from the second to the fourth floor, it being contemplated that employees shall either walk down from the fourth to the third floor or ascend by ordinary stairs from the second to the third floor. One escalator will run from the fourth to the fifth floor and one from the fourth to the sixth floor. This escalator installation involves an investment of approximately $100,000.

THE S. MORGAN SMITH CO., of York, Pa., is installing for the American Optical Co. at Southbridge, Mass., two pair of horizontal turbines, with an aggregate of 500 HP. under 11 ft. head. Each pair of these wheels is connected to a belt-driven generator, and the current is to be used for operating the machinery of the latter company. The speed of each pair of turbines is regulated by a Lombard governor, and the arrangement will be such that, although each pair of wheels is in a separate power house and the engine room at a third location, either pair of turbines can be stopped or started and the speed controlled from the switchboard, which is located in the engine room. The Smith Company is installing for the Otis Fibre Board Co. at Russell, Mass., two pair of horizontal wheels, each pair to develop 400 HP., under 22 ft. head. These wheels are to be direct-connected [illegible] electrical generators, the current from [illegible] will be used for industrial purposes. [illegible] wheels and generators are all inside [illegible] dam, the wheels setting in concrete [illegible] and the walls of generator room [illegible] water-tight concrete construction. [illegible] wheel pits and tailraces are formed by [illegible] underneath the dam. The Smith [illegible]pany is furnishing the International [illegible] Co., for their power plant at Livermo[illegible]lls, Me., an hydraulic equipment, con[illegible] of six pair of turbines, each pair to [illegible]p over 1,300 HP. under 32 ft. head, [illegible] small wheel to drive an exciter unit. [illegible] wheels are all mounted on horizontal [illegible] and set in steel cases, and are direct[illegible]ted to pulp grinders and electrical generators.

THE WESTINGHOUSE COMPANIES of East Pittsburg has lately received [illegible] from the Toledo Gas, Electric & Heating Co., Toledo, for two 1,000 KW. turbo-generator sets, the Penn. R. R. Co. for [illegible] KW. turbo-generator sets, the Water, Light and Gas Co., of Hutchinson, Kan., [illegible] two 500 KW. turbo-generator sets and [illegible] Solvay Process Co., of Syracuse, N. Y., [illegible] one 500 KW. tlrbo-generator set. Each [illegible] will be of the type known as the multiple-expansion parallel flow with an overload capacity when running condensing of at least 50 [illegible] and the alternating current generators will [illegible] of the turbo type with rotating fields. The turbines for the Toledo Gas, Electric & Heating Co. will be adapted for driving a direct-connected 60-cycle generator running at 1,800 r. p. m. and giving 7,200 alternations per minute, each being capable of developing 1,500 B. HP. when operating at 1,800 r. p. m. with dry saturated steam at the throttle of 150 lbs. pressure and 28 ins. vacuum in the exhaust pipe. They will be provided with secondary governor valves, by means of which 50% overload may be developed, or full load developed when operating with condenser. The generators will have four poles and will deliver three-phase current at 4,400-4,800 volts. The generator frames will be of the enclosed type with the latest and most improved system of ventilation. The two 500 KW. turbines for the Water, Light & Gas Co. will operate with dry saturated steam at the throttle of 150 lbs. pressure and 28 ins. vacuum. The 60-cycle generators will deliver two-phase current at 2,200 volts. The 500 KW. steam turbine for the Solvay Process Co. will operate with dry saturated steam at the throttle of 125 lbs. gage pressure and 28 ins. vacuum. The 60-cycle direct-connected turbo-generator will deliver two-phase current at 440 volts. This company already has in operation a number of Westinghouse steam and gas engines, in addition to 3,500 HP. in Roney mechanical stokers. Westinghouse apparatus is also installed in the Detroit plant of this company. The Westinghouse Machine Co., which has built some large steam engines in this country, has within the last few weeks booked orders for more than 75 steam engines, aggregating 10,764 HP. Of the different types of steam engines manufactured by this company, 5,040 HP. of marine type were sold, 2,740 HP. of compound steam engines, 1,823 of standard, 801 of Junior and the remainder of Corliss. The largest single order during this time was received from the Tahuantopac Ry. of Mex., for four 16 in. and 34 in. × 16 in. marine type engines, and two 8½ × 8 ins. Standard engines for equipping their Salina Cruz and Coatzacoalcos power houses. Other orders were received from the Rio de Janeiro Tramway, Light & Power Co., of Brazil; the Chicago, Milwaukee & St. Paul Railway Co., Chicago, for compound steam engines, and still others from the Lawrence Machine Co., Lawrence, Mass.; Penn. R. R. Co., Wilmore, Pa.; Hokkaido Tanko Ry. Co., Japan; Muncie & Portland Traction Co., Portland, Ind.; International Steam Pump Co., New York; Kure Arsenal, Japan; Graham Bros., Stockholm, Sweden; Vesta Coal Co., Pittsburg; Gray Mfg. Co., Gastonia, N. C.; Furukswa Western Bureau, Japan; Home Light, Heat & Power Co., Springfield, O.; Erie R. R. Co., Great Falls & Old Dominion Ry., Baltimore; the Sidney Electric Co., Sidney, O.; Kiuskiu Ry., Japan; Imperial Printing Office, Japan; Waltham Gas Light Co., Waltham, Mass.; Lumberton Cotton Mills, Lumberton, N. C.; Am. Car Heating Co., Santa Cecelia Sugar Co., Cuba.

THE WHITEHEAD & KALES IRON WORKS, Detroit, Mich., has been incorporated to carry on the business of Whitehead & Kales, contractors and engineers for steel structures, with offices and works at Beecher Ave. and the Michigan Central Ry. Capital stock, $100,000. Pres., James T. Whitehead; Vice-Pres. and Engr., Wm. R. Kales; Secy., J. T. Warner; Supt., Wm. H. Steget.

THE JEFFREY MFG. CO., of Columbus, O., has recently established a New England branch with offices in the Oliver Building at 141 Milk St., Boston, Mass. Mr. H. C. Freeman, for many years with the home office at Columbus, is the engineer in charge. Catalogues, prices and specifications covering the Jeffrey complete line, can be had by addressing this office.

TRADE PUBLICATIONS.

MINING MACHINERY.—Allis-Chalmers Co., Milwaukee, Wis. Paper; 8 × 10½ ins.

Two recent bulletins of the company, respectively Nos. 1,403 and 1,404, describe the Hancock jig and the McDougall roasting furnace.

CONVEYING TROLLEY TRACK.—Coburn Trolley Track Mfg. Co., Holyoke, Mass. Paper; 6 x 9 ins.; pp. 8; illustrated.

The Coburn track, switches and other fittings for it are the subject of this circular.

SAW-MILL MACHINERY.—Allis-Chalmers Co., Milwaukee, Wis. Paper; 8 × 10½ ins.; pp. 48; illustrated.

Head blocks, set works and carriages are the principal items of the contents of this catalogue.

MOTOR CONTROLLERS.—Cutler-Hammer Co., Milwaukee, Wis. Paper leaflets; 5 × 8 ins.; serial.

Crane controllers, and resistances for drum-type machine-tool controllers, are features of recently-issued, serial catalogue leaflets of this company.

ELECTRIC WINCH.—Sprague Electric Co., 527 West 34th St., New York, N. Y. 8 × 10½-in. flyer.

A motor-driven winch or capstan, complete with motor and controller in the winch frame, is pictured. It has an effective output of 300,000 ft.-lbs. per minute, at the rope.

WATERPROOF CONCRETE. — Sandusky Portland Cement Co., Sandusky, O. Paper; 3¼ × 6¼ ins.; pp. 12.

A compound which is added to Portland cement to make waterproof mortar or concrete is described and a number of testimonials are quoted.

CONCRETE MIXERS.—The International Fence & Fireproofing Co., Columbus, O. Paper; 4 × 12 ins.; pp. 16; illustrated.

This pamphlet describes the batch concrete mixer made by the firm named.' This mixer is furnished mounted on special trucks with boiler and engine or gasoline engine.

MASTIC ROOFING.—National Mastic Roofing Co., Edwardsville, Ill. Folding card; 4½ × 7 ins.; pp. 6; illustrated.

The company's roofing materials, felt, building paper, paints and preservative compounds are briefly mentioned; and views are given of building on which the mastic roofing has been used.

ROTARY BLOWERS.—Buffalo Forge Co., Buffalo, N. Y. Paper; 3½ × 6½ ins.; pp. 24; illustrated.

A condensed or pocket catalogue of centrifugal fan blowers designed for cupola, furnace, sand blast, pneumatic tube, and similar service.

HOT-BLAST HEATING EQUIPMENT.—American Blower Co., Detroit, Mich. Paper; 7 × 9 ins.; pp. 32; illustrated.

Fan blowers, blast heating coils, and engines for driving blast fans are shown here, and construction and capacity of blast-heating systems are briefly discussed.

BOILER AUXILIARIES.—Schaeffer & Budenberg Mfg. Co., New York City. 4-p. circular; 10 × 12½ ins.

Boiler specialties are advertised in this circular; gage glasses of high durability, an anti-rust coating, a rust remover and pumps of the Pulsometer type.

STEAM TURBINES.—The Westinghouse Machine Co., East Pittsburg, Pa. Paper; 9 × 12 ins.; pp. 20.

A report of an efficiency test made on a 400-KW. steam turbine built by the Westinghouse Machine Co., and tested by F. P. Sheldon & Co., of Providence.

ELECTRIC GENERATORS.—National Electric Co., Milwaukee, Wis. Paper; 7 × 10 ins.; serial.

Bulletin 355 of this company contains descriptive and catalogue information about belt-driven direct-current generators for lighting and railway service.

WATER-POWER DEVELOPMENT. — The Arnold Company, Marquette Bldg., Chicago, Ill. Paper; 9 × 12 ins.; pp. 16; illustrated.

A description of the water-power electric generating plant of the Spring River Power Co., at Joplin, Mo., reprinted in part from Engineering News of March 30, 1905.

CONCRETE BUILDING BLOCKS.—American Hydraulic Store Co., Century Building, Denver, Colo. Paper; 6 × 9 ins.; pp. 16; illustrated.

The blocks are of approximately T-shape, and the pamphlet illustrates a variety of buildings, large and small, plain and ornamental, built under this system. Several testimonials are also given.

STEAM ENGINES.—Westinghouse Machine Co., East Pittsburg, Pa. Paper; 6 × 9 ins.; pp. 36; illustrated.

A thorough descriptive discussion of the Westinghouse "Standard" engine, the favorably known engine of vertical enclosed duplex single-acting, single-valve type. Reasons are given for all details of the design.

PAINT.—Detroit Graphite Mfg. Co., Detroit, Mich. 4-p. flyer; 4 × 3 ins.

Advertises Superior Graphite Paint for rust prevention.

MACHINE TOOLS.—Pratt & Whitney Co., Hartford, Conn. Card folder.

A new advertisement of the noted Pratt & Whitney thread milling machine recently issued takes the form of a recessed postal card containing an album of views of difficult work done on the thread milling machine.

PIPE CRUSHING AND SHEARING MACHINE.—United Engineering & Foundry Co., Pittsburg, Pa. Paper; 10 × 8½ ins.; pp. 6; illustrated.

The machine shown is for flattening and cutting into short lengths scrap pipe. It does the work hitherto performed by two separate machines.

STEAM TURBINES.—General Electric Co., Schenectady, N. Y. Paper; 5¼ × 7¾ ins.; pp. 16; illustrated.

A test made some months ago on a 2,000-KW. steam turbine generating unit of Curtis type furnished to the Chicago Edison Co. is summarized in a neat pamphlet recently issued by the General Electric Co.

PNEUMATIC TOOLS.—Independent Pneumatic Tool Co., First National Bank Building, Chicago, Ill. 4-p. circular; 9 × 12 ins.

A new line of pneumatic tools is brought out in this circular under the trade name "Thor." The list includes hammers from 1 to 9 ins. stroke, breast drills, wood boring drills and screw-feed drills.

CONCRETE BLOCK MACHINE.—The P. B. Miles Mfg. Co., 23 Dwight Block, Jackson, Mich. Paper; 5 × 7¼ ins.; pp. 16; illustrated.

The Miles machine is illustrated and described, and information is given as to the manufacture of the blocks, while some of the views show buildings constructed of these blocks.

BELT DRESSING.—Cling-Surface Co., Buffalo, N. Y. Paper; 4½ × 7 ins.; pp. 71; illustrated.

A reprint of a thesis study of the effect of belt dressings upon the friction coefficient, slip and arc of contact of leather belts. Cling-Surface, neats-foot oil and two other belt dressings were used in the tests.

RAIL BONDS.—American Steel & Wire Co., Chicago, Ill. Paper; 4¾ × 9½ ins.; pp. 12; illustrated.

Laminated and stranded link rail bonds, with terminals of various kinds from soldered to plug, are shown here. Bonding tools, as clamps, hydraulic and screw compressors, brazing burners, and grinders, are also shown. No lists are given.

GRINDING WHEELS.—The Pike Mfg. Co., Pike, N. H. Paper; 3½ × 6 ins.; pp. 8.

In this catalogue of emery wheels, including plain and cut wheels, one or two valuable items of information are given, a table of revolutions for given surface speed, and some bits of advice. Grinder and wheel dressers are also mentioned.

HOISTING DRUM.—The Hayward Co., 97 Cedar St., New York City. Paper; 3½ × 6 ins.; pp. 8; illustrated.

A special double drum is shown here, which may be used, for example, on a single drum hoist which is to use double chain buckets. The drum appears to be in two parts which may be run together by tightening the friction.

GASOLINE ENGINE.—Olds Gasoline Engine Works, Lansing, Mich. Paper; 8 × 10½ ins.; pp. 12; illustrated.

The gasoline engine described as Type "A," and designed with special reference to utmost simplicity and reliability, is described here in some detail. It is a single cylinder horizontal machine and is built in sizes up to 7 HP.

DIRECT CURRENT SWITCHBOARDS.—Stanley-G. I. Electric Mfg. Co., Pittsfield, Mass. Paper; 6 × 9 ins.; pp. 29; illustrated.

Switchboards for isolated plants running on a single generator are here listed. The different styles for from one to six feeders are shown in separate diagrams, and capacities, weights and prices are given.

INDUCTION MOTORS.—Richmond Electric Co., Richmond, Va. 4-page circular; 8 × 10½ ins.

A line of alternating current induction motors, built from 1 to 20 HP., any size, for any phases, cycles and voltage, is advertised in this circular. These machines have only recently been put on the market and are said to be built for hard service.

MANILA ROPE.—C. W. Hunt Co., West New Brighton, N. Y. Paper; 6½ × 9¼ ins.; pp. 48; illustrated.

A publication of exceptional value is issued by the C. W. Hunt Co. under the title of "Manila Rope for Transmission and Hoisting." It is a treatise for engineers, written by Mr. C. W. Hunt. No one who has to deal with fiber rope should be without the booklet.

MACHINE TOOLS.—Niles-Bement-Pond Co., 111 Broadway, New York, N. Y. Paper; 9 × 12 ins.; serial.

The November issue of the company's "Progress Reporter" shows new designs in lathes, boring mills, rifling and other special machines, etc., to the number of about a dozen. General views only are shown, and the value of the publication would be greater if detail views or drawings were added.

ALTERNATORS.—National Electric Co., Milwaukee, Wis. Paper; 7 × 10 ins.; serial.

In Bulletin 360 the construction of alternating current generators designed for connection to water turbines is described. As this usually means transmission service, the machines show, it is claimed, specially good qualities in wave-form and regulation. Frequencies of 25 and 60 cycles are assumed as standard.

CONCRETE BLOCK MACHINE.—C. S. Wert, Kendallville, Ind. Paper; 3½ × 6 ins.; pp. 16; illustrated.

The "Perfect" machine for making concrete building blocks is described and illustrated. Information is given as to its use, and as to the composition of concrete for different purposes. The machine is operated by hand, and makes plain or ornamental blocks of various patterns.

TURNTABLE ENGINE.—Tatlow Turntable Attachment Co., Denver, Colo. Folding circular; 6½ × 14 ins.; illustrated.

The attachment is a compressed air engine or motor geared to one of the end wheels of the turntable; power is taken from a compressor or from the locomotive on the turntable. Figures of cost of operation of turntables by power of various kinds are given, and there is a list of railways using the device, together with testimonials.

BALL AND ROLLER BEARINGS.—Standard Roller Bearing Co., Philadelphia, Pa. Paper; 4½ × 7 ins.; pp. 88; illustrated.

Ball and roller bearings for general service are quite fully catalogued here. Steel balls of several brands, rollers, hardened and ground bushings, and screw-machine products, are included in the catalogue. For fuller treatment of special bearings, as automobile bearings, reference is made to another catalogue.

ELECTRIC HOISTS.—Yale & Towne Mfg. Co., 9 Murray St., New York, N. Y. Paper; 6 × 9 ins.; pp. 8; illustrated.

A neat electric hoist, built in capacities from 1 to 6 tons, and self contained with controller, etc., complete, is illustrated and listed in this pamphlet. Several styles of trolley or carriage which may be used to carry such hoists where it is desirable to have a traveling hoist, are also shown. The trolleys are plain, hand-geared, or motor-driven.

CRUSHERS AND CONCENTRATING MACHINERY.—Power & Mining Machinery Co., Cudahy, Wis. Paper; 6 × 9 ins.; two pamphlets, pp. 4 and 8; illustrated.

The McCully gyratory crusher is described in the 4-page pamphlet, dimensions being given for machines of 5 to 300 tons capacity per hour. The 8-page pamphlet deals with the Niedermeyer classifying and concentrating jig.

CONCRETE PIPE AND CATCH-BASINS.—Jackson Cement Sewer Pipe Co., Jackson, Mich. Paper; 9 x 6 ins.; pp. 16; illustrated.

The pipes are of concrete reinforced by steel bars and hoops, the bars projecting to couple to those of adjacent pipes by means of a connection band, the joints being then filled with cement. The catch-basins are made in place, by means of steel molds or forms set in the excavation.

ELECTRIC MACHINERY.—Stanley-G. I. Electric Mfg. Co., Pittsfield, Mass. Paper; 6 × 9 ins.; serial bulletins.

Bulletin 249 describes a style of transformers, known as Type Z, which are designed for use where high all-day efficiency is not required. The Wright Discount Meter is also shown. Bulletin 145 advertises a line of direct-current motors and dynamos, made in sies up to 15 NP; suitable strating rheostats are also listed.

JEFFREY ELECTRIC MINE LOCOMOTIVES: Bulletin No. 10.—The Jeffrey Mfg. Co., Columbus, O.; 8 × 10 ins.; pp. 68.

The extraordinary development in the application of electric traction to mine railways, particularly in collieries, is well set forth in this book. The old prejudice against electricity in mines on account of the danger of firing gas by sparks or the danger of accidental contact with the trolley wire appears to have pretty much disappeared. Besides the regular line of mine locomotives operated by the adhesion of the drivers, a combined rack and adhesion locomotive is made by the Jeffrey Company which engages with a rack-rail to climb or descend steep grades. Another interesting machine is the "gathering" locomotive for running into rooms where no trolley wire exists, over sharp curves and rough track. Current is furnished by a cable, wound on a reel. The cable is automatically paid out as the locomotive moves away from the source of current, and wound up as it returns, and there are ingenious devices for winding it symmetrically on the reel.

STEAM TURBINES.—De Laval Steam Turbine Co., Trenton, N. J. Paper; 3½ × 6½ ins.; pp. 22; illustrated.

Following a brief illustrated description of the well-known De Laval steam turbine, this booklet shows direct connected dynamo sets, alternating current generators, centrifugal or turbine pump sets, pumping sets comprising an electric motor driving a turbine pump, blower sets and the like.

ELECTRIC TRACTION.—General Electric Co., Schenectady, N. Y. Paper; 8 × 10½ ins.; pp. 37; illustrated.

Under the title "Electricity vs. Steam for Train Haulage," two technical papers read within the last year are here reprinted: "Developments in Electric Traction," by W. B. Potter, and "The Electrification of Trunk Lines," by L. R. Pomeroy. Both papers contain matter of considerable interest to those interested in heavy electric traction.

PUMPS AND COMPRESSORS.—National Steam Pump Co., Upper Sandusky, O. Paper; 6¾ × 6 ins.; pp. 28; illustrated.

Steam pumps for high duty and light service, with single and double plungers, are listed; also hydraulic pressure pumps and steam heads for well pumps. Other specialties include air pumps and jet condensers, air compressors, and an automatic feed pump and receiver for draining heating systems. Tables of dimensions and capacities are given in each case.

GRADING MACHINERY.—Smith & Sons, Mfg. Co., Lydia and Guinotte Aves., Kansas City, Mo. Paper; three pamphlets; one 10 × 6¾ ins., pp. 16; two 6½ × 10 ins., pp. 4; all illustrated.

The Royal grading machine for road and ditch work, etc., is described and illustrated in the first of these pamphlets; some of the views show the machines at work, and there are several testimonials. The two smaller pamphlets relate to the Royal wheel and drag scrapers, respectively, and also to grading plows for railway and road work.

PIPE, BRICK AND FIRE CLAY.—Laclede Fire Brick Mfg. Co., Manchester and Sulphur Aves., St. Louis, Mo. Paper; 3½ × 6¼ ins.; pp. 24; illustrated.

The fire clay products include plain and special blocks for furnaces, cupolas, etc.; also tile, flue lining, gas retorts and kilns. Vitrified sewer pipe, conduits, well tubing, drain tile, floor arch tile, fireproofing, and paving brick are also included, as well as such architectural work as chimney tops and wall copings. Dimensions and prices are given in each case.

DUMP WAGONS AND CARTS.—Tiffin Wagon Co., Tiffin, O. Paper; 6½ × 3⅛ ins.; pp. 16; illustrated.

The wagon has four steel dumping hoppers or buckets carried in a wagon frame; the driver walks along a running board and operates them by means of a lever. The cart has a ¾-yd. bucket journaled between a pair of carrying wheels, no axle being used; it can be used for handling stone, bricks, etc.; and a larger machine, with 1¼-yd. bucket, is built for street and contractors' use. Wagons, logging trucks, etc., are also listed.

LOCKS AND HARDWARE.—The Yale & Towne Mfg. Co., 9 to 15 Murray St., New York Sity. Cloth; 6 × 9 ins.; pp. 206; illustrated.

Many varieties of locks, including both plain and ornamental, are illustrated, described and priced; also various door trimmings. There is a useful glossary of technical terms relating to locks and hardware, an interesting technical description of the Yale lock, a biographical sketch of Louis Yale, the inventor of the lock bearing his surname, and a "Lock Primer." The latter contains much information of value.

GAS PRODUCERS.—American Suction Gas Producer Co., Lansing, Mich. Paper; four pamphlets, 6 × 3½ ins.; pp. 24; 8 × 10½ ins., pp. 8; 8 × 10 ins., pp. 4; and 9 × 11 ins., pp. 4; all illustrated.

These pamphlets relate to the Pintsch suction gas producer system, and the first pamphlet consists of testimonials from a number of users in Germany. The next is a reprint of a lecture by Mr. Gerdes, Chief Engineer of the Pintsch company, and the third gives a comparison of gas with other powers in point of cost, etc. The fourth pamphlet gives a list of about 40 plants in foreign countries, ranging from 8 HP. to 2,000 HP.

MOTORS AND DYNAMOS.—Barriett Electric Co., Cincinnati, O. Paper; 7½ × 10 ins.; pp. 24; illustrated.

Barriett motors and dynamos, direct current machines, are well catalogued here. Sizes from ¼ to 15 HP. are built.

MOTORS AND DYNAMOS.—Electro-Dynamic Co., Bayonne, N. J. Paper; 6 x 9 ins; serial circulars.

The Electro-Dynamic circulars present matter of interest primarily to motor users. Circulars 1 to 8 describe the Inter-Pole variable speed motor, and several kinds of starters suitable for controlling it. These equipments are specially intended for machine-tool driving and similar work. Circular 8 lists a line of constant-speed motors, while No. 9 is a similar list (of weights, speeds, sizes, prices) of a line of direct-current generators and motors intended for constant-speed work.

MACHINE TOOL DRIVING. — Crocker-Wheeler Co., Ampere, N. J. Paper, 7½ × 10 ins.; 32-p. pamphlet and serial bulletins.

A neatly printed pamphlet of recent date contains an abridged reprint of a series of papers by Mr. R. V. Wright on "The Application of Individual Motor Drives to Old Machine Tools," which relates largely to the equipment of the McKees Rocks shops of the P. & L. E. Ry, with Crocker-Wheeler motors and the four-wire multiple-voltage system. The latest Crocker-Wheeler serial bulletins describe small motors, railway and lighting generators, steam-driven generating sets, and other standard direct-current machinery.

CONVERTIBLE BALLAST AND FREIGHT CARS.—Rodger Ballast Car Co., Railway Exchange, Chicago, Ill. Paper; 3½ × 6½ ins.; pp. 48; illustrated.

The Rodger cars, which have been described and illustrated in our columns, are shown here in various forms, adapted for various classes of service. There are flat, gondola and bax cars, convertiblt from flat, floor to hopper-bottom arrangement, and for both side and center dumping. The distributing car for leveling ballast deposited from the center-dump cars is shown. There is also a list of some 120 users of these cars, including steam and electric railways, coal companies, and contractors.

WATER PURIFICATION AND SOFTENING.—The Electric Water Purifying & Filter Co., 25 Broad St., New York City. Paper; 5½ × 8 ins.; pp. 8.

A combination of electrolytic and filtering processes is here put forward as a means of softening, sterilizing and otherwise purifying water. The electrolytic process is relied upon to precipitate suspended matter and at the same time to be fatal to bacteria through the agency of "ozonized oxygen." It is claimed that the electrolytic process employed precipitates the various scale-forming compounds, destroys acidity and at the same time deposits at the cathoda such iron as may be in the water. A few analyses are given to support some of the claims made.

PUNCHES AND SHEARS.—Buffalo Forge Co., Buffalo, N. Y. Paper; 10½ × 6½ ins.; pp. 8; illustrated.

A rather novel line of punches, plate shears and angle shears is catalogued in the above noted pamphlet. They are all designed for extreme lightness and are therefore mainly of steel plate riveted construction, and, by the way, are all intended for hand operation. A large number of different styles and sizes is shown; weighs and (what is more important) prices are stated throughout.

PNEUMATIC TOOLS.—Cleveland Pnuematic Tool Co., Cleveland, O. Paper; 9 × 6 ins.; pp. 64; illustrated.

Pneumatic tools of the hammer and the drill types are very fully shown and discussed in the present catalogue. A number of excellent photographic views shows the wide range of service to which such tools are applicable. Something of a novelty is a tool of the hammer type intended as a pattern rapper. A special form of hose coupling for air hose is also illustrated.

SCIENTIFIC INSTRUMENTS.—The Scientific Shop, 324 Dearborn St., Chicago, Ill. Paper; 6 × 9 ins.; illustrated.

Several special instruments and appliances for the physical laboratory are catalogued here. Optical appliances, equipment for radium and radio-activity demonstrations, Le Chatelier pyrometers, photographic replicas of Rowland diffraction grating, and fine balances, are the principal items.

COLLAPSIBLE CENTERS FOR CONCRETE SEWERS.—Collapsible Centering Construction Co., 27 East Alexandrine Ave., Detroit, Mich. Paper; 3¾ × 6½ ins.; pp. 12; illustrated.

This centering is intended for use in the construction of large sewers, conduits, etc., of stone or brick masonry or of concrete. The construction of the centering and the methods of erecting and releasing it are described.

STEAM TRAPS.—National Equipment Co., Holland Building, St. Louis, Mo. 3½ × 6-in. folder.

A brief advertisement of the Branch steam trap and return trap, for which special simplicity is claimed.

INDUCTION MOTORS.—National Electric Co., Milwaukee, Wis. Paper; 7 × 10 ins.; serial.

Bulletin 359, 8 pp., describes polyphase induction motors, 25 and 60 cycles, in sizes from 1 HP. up.

METALLIC PACKING.—C. Lee Cook Mfg. Co., Louisville, Ky. Paper; 6 × 9 ins.; pp. 32; illustrated.

Cook's metallic packing can be applied, as shown by the views in this pamphlet, to all kinds of stuffing boxes without change in design.

FACTORY ROOFS.—D. F. Nisbet, Lewis Bldg., Pittsburg, Pa. Paper; 9 × 6 ins.; pp. 16; illustrated.

The Aiken patented roof construction comprises a series of transverse monitors set at short intervals on a roof of low transverse pitch.

GAS ENGINES.—De La Vergne Machine Co., Foot East 138th St., New York City. Paper; 10½ × 7½ ins.; pp. 48; illustrated.

Covers completely the Koerting gas engines manufactured in this country by the De La Vergne Co., with a few words on the Koerting suction gas producer.

STEAM SPECIALTIES.—Warren Webster & Co., Camden, N. J. 4 × 9-in. folder.

A condensed list of Warren steam specialties, mainly parts of the Warren system of steam heating; feed-water heaters, separators and some other appliances are also shown.

PUMPS.—Luitwieler Pumping Engine Co., 707 North Main St., Los Angeles, Cal. Paper; 9 × 7 ins.; pp. 56; illustrated.

The present edition of this catalogue contains the usual extended descriptive matter of pumps for various services and also testimonials; some of the latter are of recent date.

ELECTRIC LAMP FITTINGS.—Benjamin Electric Mfg. Co., 42 Jackson Blvd., Chicago, Ill. Paper; 6 × 9 ins.; pp. 64; illustrated.

A complete catalogue of Benjamin "Wireless" clusters, lamp shades, holders and related supplies. Prices and package amounts are given.

GAS ENGINES.—The Foos Gas Engine Co., Springfield, O. Paper 10½ × 8 ins.; pp. 40; illustrated.

Any person desiring to purchase a gas or gasoline engine will find the Foos engine fully described, as a whole, and in all its parts, in this pamphlet. The ample illustrations will exhibit the construction.

CONDENSERS.—Williamson Bros., Co. Philadelphia, Pa. Paper; 6 × 9 ins.; pp. 32; illustrated.

Condensers for stationary and marine service, of surface, jet, barometric and ejector types, and cooling towers and evaporators are described. A few pages of diagrams and tables add value to the book.

ELECTRIC CAR TRUCKS.—Baldwin Locomotive Works, Philadelphia, Pa. Paper; 9 × 6 ins.; pp. 30; illustrated.

Some important recent types of trucks for electric cars are catalogued and illustrated here. The illustrations, unfortunately, are confined to half-tone views, and no drawings are given; a defect which is only partly made up by the full tables and dimensions.

THREE-PHASE ELECTRIC TRACTION.—Railway Electric Power Co., 114 Liberty St., New York City. Paper; 11 × 14 ins.; pp. 30; illustrated.

The Ganz system of three-phase traction, using induction motors, is quite thoroughly described as applied on the Valtellina line in Italy. The effort is now being made to introduce the system in America for main line work.

PUMPING MACHINERY. — Allis-Chalmers Co., Milwaukee, Wis. Paper, 8 × 10½ ins.; illustrated.

Bulletin No. 1607, an 8-p. pamphlet, gives a few words of recommendation for horizontal crank-and-flywheel plunger pumps, as made by this company. Bulletin 1608 (4-p.) refers in a similar superficial manner to single stage centrifugal pumps designed for direct driving by electric motor.

STEAM APPLIANCES.—Schaeffer & Budenberg Mfg. Co., New York City. Paper; 9¼ × 12¼ ins.; pp. 52; illustrated.

This catalogue is completely filled with illustrations of the many different products of the Schaeffer & Budenberg Mfg. Co. These range from gages and thermometers to valves, cocks, revolution counters and tachometers, and a great number of other steam and boiler appliances.

LEAD GOODS.—Colwell Lead Co., 63 Centre St., New York. Paper; 5½ × 8 ins.; pp. 59; illustrated.

Lead pipe, pig, bar and sheet lead, window cames, lead shot, and many related goods are catalogued (without prices) in this book. Much miscellaneous information is given in the last dozen or so pages which is valuable, although lead is not the heaviest of metals as stated, nor is a fodder equal to 91½ cwt. as stated.

WIRE ROPE.—American Steel & Wire Co., Chicago, Ill. Paper; 9 × 12 ins.; serial.

The first issue of the "American Wire Rope News," intended to be a serial containing information and news of interest to those who deal with wire rope, and incidentally advertising American wire rope, has just been issued, under the care of Mr. F. Baackes, vice-president of the company. The paper is of 12 pages, and contains numerous well-executed illustrations.

CLAY PRODUCTS.—Laclede Fire Brick Mfg. Co., St. Louis, Mo. Paper; 3½ × 6½ ins.; pp. 24; illustrated.

Fire brick is shown here in a large variety of shapes and dimensions, suitably listed. Fire clay, flue lining, socket pipe, chimney tops and gas retorts are also shown. Separate space is devoted to ordinary vitrified sewer pipe, well tubing, coping, gutter pipe and the like, and hollow tile floor and partition material.

CHANNELERS.—Ingersoll-Rand Co., 11 Broadway, New York City. Paper; 6 × 9 ins.; pp. 48; illustrated.

A valuable discussion of channelers, their possibilities and work, is contained in this catalogue, in connection with description and illustration of the several types of channelers made by the company. Both fixed-back and swing-back machines are shown, as well as the bar or Broncho channeler, and under-cutting or horizontal channeler.

INSULATORS.—The Locke Insulator Mfg. Co., Victor, N. Y. Paper; 4¾ × 7¼ ins.; pp. 34; illustrated.

The large insulator book of the Locke Company has in this pamphlet a supplement giving additional matter. Several new styles of line insulators, and a number of insulators for special locations, are shown, and the numerical data concerning them given. A variety of pins is also given, including a pole-top pin intended to be bolted to the side of the hole.

DRYING EQUIPMENT.—United States Drying Engineering Co., 66 Beaver St., New York City. Paper, 9 × 6 ins.; pp. 16; illustrated.

The construction of machinery for drying bulk materials is not a matter of stock manufacturing, but should follow special design for each individual case. This is frankly stated in the above circular. Several sectional views of different forms of dryer are given as a suggestion of the means by which successful drying may be done.

For other Proposal Advertisements see pages 43, 44, 45, 46, 47, 48, of Advertisements and Construction News page 198.

PROPOSALS FOR CONSTRUCTION.—Office Constructing Quartermaster, Fort Assinniboine, Montana, November 30, 1905.—Sealed proposals, in triplicate, will be received here until 11.00 A. M., December 30, 1905, and then opened, for construction of one brick Cavalry Stable for 73 horses—Plan 54 H; and also for construction of a Bacterial Sewage Purification Plant—Plan Spl/2-707, at Fort Assinniboine, Montana, in accordance with plans and specifications to be seen at this office, also at office of Chief Quartermaster, Department of Dakota, St. Paul, Minn., and at office of Chief Quartermaster, Department of the Lakes, Chicago, Illinois, where instructions to bidders and blank form of proposals can be procured. Work to begin when frost is out of the ground in the spring of 1906. Bidders must state in their proposal the time they will commence and complete the work. A guarantee in the amount of 10 per cent. of amount of bid will be required. Unguaranteed bids will not be considered. The Government reserves the right to reject or accept any or all bids, or any part thereof. Envelopes to be indorsed "Proposals for Construction," and addressed to CAPTAIN J. B. McDONALD, Constructing Quartermaster. 23-4t

OFFICE OF THE COMMISSIONERS, D. C., Washington, D. C., November 28, 1905.—Sealed proposals will be received at this office until twelve o'clock M., Wednesday, December 20, 1905, to construct a Public Convenience Station in Reservation 7. Forms, specifications and necessary information may be obtained at this office. HENRY B. F. MACFARLAND, HENRY L. WEST, JOHN BIDDLE, Commissioners, D. C. 22-2t

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WANTED.—Assistant engineer on railroad work in Middle West. Applicants state qualifications and salary required. Address LOCK BOX 83, Jeffersonville, Ind. 23-1t

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